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ORIGINAL ARTICLES.

HEREDITARY INFANTILE SYPHILIS.[1]

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HOWEVER interesting the various sources of acquired infantile syphilis may be, it is not proposed to consider them here, but only to treat of the hereditary variety. Nor is it intended to cover the whole field, for then the limits of this paper would extend further than the time allotted. Nor is it meant to be implied by the title that the author believes in the existence of tardy or belated hereditary syphilis, for he is inclined to agree with those writers who are of the opinion that in those cases which are designated as *syphilis herediteria tarda*, the symptoms of the disease probably escaped recognition earlier in life. Strictly speaking, the term hereditary syphilis should only apply to those cases in which the infection occurs at the time of conception. From a clinical standpoint it is more practical to designate all cases, whether the subject is infected at the time of conception or subsequently, as congenital syphilis.

It has been definitely determined that there are three modes of infection: First, the woman being syphilitic, the ovum is infected; second, infection of the ovum through the spermatozoa; and, third, after conception by the intra-uterine transmission of the infection to the fetus. As there is no direct communication between the lymphatics or blood-vessels of the mother and the fetus, the transmission must take place through the layer intervening between the placenta and the decidua. Hence, the infection of the fetus probably depends upon the relative strength of the leucocytes on the fetal and those on the maternal side. If the placenta be healthy, it is possible for the infant to escape the infection even although the mother herself be syphilitic. If infection of the woman does not occur until about the last two months of pregnancy the fetus usually escapes the disease. The first effect of infection upon the woman is sterility, but with the lapse of time its virulence may abate; pregnancy will occur which is usually interrupted before the seventh month. The disease may be inherited from either one or from both of the parents. If both are syphilitic the child is usually syphilitic, although it need not necessarily be so. Nor is the disease more severe in the child if both parents are syphilitic than if one parent only be affected. The stage of the disease in the person of the progenitor will determine the transmissibility of the infection to the offspring, for if both parents are suffering from secondary symptoms transmission will be almost certain. If active treatment shall have been carried on for several months and the child be born when no active symptoms are present in the parents, or if the symptoms are tertiary in character in the parents, the child will probably escape. The first-born is more likely to suffer more severely from the infection than later born children, provided infection of the parents has occurred previous to the birth of all the children.

Quite recently in the *Wiener Klinische Wochenschrift* for 1897, vol. x, p. 564, Dr. K. Hochsinger has advanced a new theory of the development of congenital syphilis. He maintains that in the fetus and in young infants, in its early manifestations, congenital syphilis is characterized by a tendency to diffuse infiltration, whereas in the early forms of acquired syphilis the type of a circumscribed cell proliferation is observed. He also claims that another peculiarity of congenital syphilis consists in the existence of diffuse changes in the integument analogous to those found in the viscera of the fetus. In support of the theory it is pointed out that the diffuse syphilitic inflammatory processes always first attack the large intestinal glandular organs of the fetus. There is no syphilitic fetus and no syphilitic stillbirth in which the liver is not the seat of a diffuse vascular and interstitial disease, and in two-thirds of all such cases the kidneys, pancreas, and lungs are unquestionably similarly affected. Hence, the logical conclusion is, according to Hochsinger, that the virus of hereditary syphilis must possess a predilection for the parenchyma of the glands, otherwise it would be impossible to explain the fact that syphilitic fetuses are attacked by a diffuse inflammation of the intestinal glands, while all the tissues of the organism escape such syphilitic affections during the early months of fetal life. The history of the development of the fetus will explain this, for during fetal development the syphilitic virus finds in these organs, which have a generous blood and lymph-supply, the most favorable places for its activity. In those parts of the organism in which the

[1] Read before the Northwestern Medical and Surgical Society of New York, May 18, 1898.

circulation is less free, as in the long bones of the fetus, the syphilitic lesions first develop at the point of largest blood-supply, and not at all in the adjacent structures. Hence, it is wrong to regard the visceral affections of the fetus and infant as tertiary in character. They should rather be looked upon as the first indications of congenital syphilis, and resemble those changes which may be demonstrated in the diffuse syphilitic inflammatory conditions of the skin in the infant. The natural history of fetal development likewise explains the frequent death *in utero* of the children of syphilitic parents.

The lesions in hereditary syphilis are more uniformly present in the bones than elsewhere. The long bones are chiefly involved, and usually at the junction of the shaft with the epiphysis. Of the viscera, the liver is probably more often the seat of syphilitic lesion in the fetus and the newly born child than any other organ. There may be an interstitial or a gummatous hepatitis, or a combination of the two. The intestinal canal very rarely shows any lesion. Catarrhal rhinitis and pharyngitis are almost constant symptoms of early cases. Fissures at the anus are frequent, extending occasionally into the rectum. At the time of birth symptoms are present in a very small number of cases, and then the infection is extremely severe and the child lives but a few days. The general appearance of these patients is miserable in the extreme. The body is greatly emaciated, the skin is wrinkled, and has lost its elasticity, the temperature is apt to be subnormal, and the spleen and liver are usually enlarged. They suck feebly or not at all, and, if untreated, die very soon.

The more intense the infection the earlier the symptoms will appear. They are usually observed between the second and sixth week, although the period is variable. Some observers have stated that several years may elapse before the appearance of symptoms, but very good authorities hold that if they do not appear within one year after birth the child may be considered free from the infection. Three-fourths of the subjects develop symptoms within the first three months. Generally the first symptom is the coryza, commonly called "snuffles," which is very persistent. Sometimes the constitutional symptoms precede the local ones, but usually the reverse obtains. At times a hoarse cry may accompany the coryza without the larynx participating in the catarrhal condition. Tenderness may exist about the joints, due to epiphysitis. Soon after the coryza eruptions will appear, first on the palms of the hands and soles of the feet and then on the face. Fissures will appear at the angles of the lips, and mucous patches will be seen on the lips and inner surface of the cheeks. The latter may also be seen at the verge and just within the anus. The eruption is usually macular, small, and dark-red in color. It is sometimes circular, and often a little elevated. It is not accompanied by any surrounding inflammation nor by itching. It gradually becomes coppery in hue, and requires from one to three weeks for development. It lasts for a period varying from three to eight weeks. Of course, if active treatment be employed, the period of its existence is shortened. Papular and squamous eruptions may also at times be present. The mucous patches and the fissures are among the most characteristic features of hereditary infantile syphilis. Radiating scars at the angle of the mouth are, therefore, invariable diagnostic features of the disease. These fissures are deep, bleed easily, and are very obstinate to treatment. Lymph-nodes are infrequently or seldom present. That condition of the teeth known as "Hutchinson's teeth" cannot be considered as pathognomonic of hereditary syphilis.

The prognosis in hereditary infantile syphilis is generally worse than in acquired infantile syphilis. This is true not only as regards life, but also as to the determination of the future constitution of the subject. It is also very difficult to reduce to a minimum the remote baneful influences of the infection. The later the disease manifests itself after birth the better will be the prognosis. In the hereditary variety relapses are not so apt to occur as in the acquired cases.

If it be permissible to perpetrate an Irish bull, the treatment of a syphilitic infant should begin before there is an infant. That is, if a syphilitic woman becomes pregnant she should at once be placed upon specific treatment, and thus probably secure the escape of the fetus from the threatened infection. In my own experience I can recall two particularly remarkable cases of this character. A syphilitic woman had aborted seven successive times, varying from the third to the seventh month of pregnancy, as a result of her infection. She consulted me at about the first month of her eighth pregnancy. I at once placed her upon specific treatment, with the addition of tincture of iron and chlorate of potash, as used by the late Professor Fordyce Barker, and at the termination of the ninth month delivered her of a large, healthy boy, who has never developed any indication of the disease. The other case was that of a woman similarly affected who had suffered from four successive abortions due to syphilitic infection. The same course was pursued as to treatment, with equally gratifying results as in the first case.

There is among physicians a disposition to stop treatment of a pregnant syphilitic woman toward the

last months of gestation. This is an error. Treatment should be pushed vigorously up to the very last moment. When it is known that either one or both parents are syphilitic, procreation should be forbidden for a period of at least two years, during which active treatment should be instituted. Then, after six months shall have elapsed without treatment and with no manifestations of the disease, procreation may be permitted.

When there is a reasonable suspicion of the disease in an infant treatment should be begun immediately after birth and vigorously continued. The old indirect method of treatment through the mother's milk is futile, and is deservedly no longer in use. The remedy *par excellence* is mercury. In young infants the best method of treatment is that by inunction. The place of inunction should be changed from day to day. A convenient way of using this method is to place a piece of the ointment on the belly-band, and by the movements of the child and the ensuing friction it is easily rubbed into the skin. The officinal blue ointment is used in this way, but it must be diluted according to the age of the infant. Or the gray powder or the bichlorid of mercury may be given internally. The former in doses of 1 grain four times daily; the latter in doses of $\frac{1}{60}$ of a grain four times daily, well diluted. If the symptoms be urgent, or if it be desired to bring the system more rapidly under the influence of the mercury, calomel should be given in doses of $\frac{1}{10}$ of a grain four times daily. The treatment with mercury should be continued for at least one year. During the last half of the year the amount per day can be reduced by one-half or by one-third. If the mercurial treatment be persisted in for a longer period than one year it will be advisable to interrupt its administration occasionally. Some have expressed a fear of administering mercury to children for so long a period, claiming that it would produce dysentery, salivation, and other disagreeable complications. This fear, I think, is not well grounded, for children tolerate mercury extremely well, and very much better than adults. Salivation is very rare indeed. The symptom which would indicate that the child is becoming profoundly affected by the drug is the occurrence of pronounced anemia. I myself give to children from half a year to two years of age in the treatment of diphtheria the bichlorid of mercury in doses of $\frac{1}{48}$ to $\frac{1}{32}$ of a grain every two hours, kept up for three and four and even five days at a time, and have yet to see any dangerous symptoms or conditions arise from the administration of these doses. If the symptoms resemble those of the tertiary stage in the adult the iodid of potassium may be given, from 20 grains to 2 drams *per diem*, according to the age of the child and the severity of the case, and, of course, largely diluted.

In conjunction with the specific treatment, the tonic treatment is of great importance, not only as regards the syphilitic infection, but with the object of getting the constitution of the patient in the best possible condition. Among the remedies to be employed cod-liver oil, iron, arsenic, and nux vomica hold a prominent place.

The local lesions of hereditary infantile syphilis will naturally demand the same treatment which is given such lesions in the acquired variety of the disease, whether in the adult or infant, the strength of the remedies employed always being adapted to the age of the patient.

THE TREATMENT OF FRACTURE OF THE PATELLA BY IMMEDIATE SUTURE.

BY WILLIS G. MACDONALD, M.D.,
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SUCH a diversity of opinion apparently exists among surgeons concerning the best method of treatment for simple fractures of the patella that I feel constrained to report my recent personal experience, confined to a limited number of cases treated by immediate operative interference. After a considerable experience with various forms of dressings, with fair, indifferent, and positively bad results, and a few cases of suture by the open method, I abandoned them all for the method to be subsequently described. No claim for originality in the various steps of the operation is raised. A number of surgeons have employed the plan in part or with distinctive modifications. The technic carefully followed has yielded uniformly favorable results.

Fractures of the patella having their origin in muscular action are usually transverse, the line of fracture being below the isthmus of the bone. Fully eighty per cent. of them are of this character. Fractures due to direct violence are usually stellate, or distinctly oblique. The encircling suture may not be applicable to all fractures of the second variety, that is, fractures due to direct violence. More or less effusion of blood into the joint is a part of every patellar fracture. The effusion always aids in the displacement of the fragments, and unless removed prevents close apposition of the fractured surfaces.

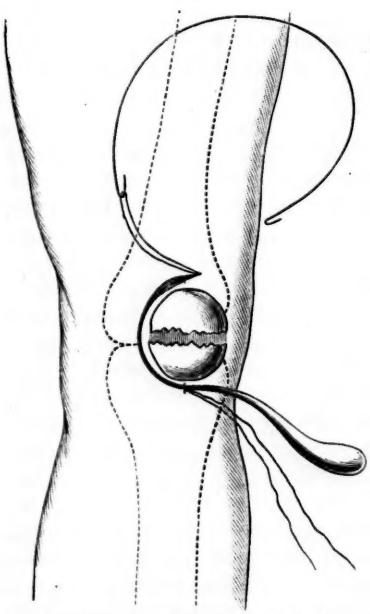
Operation.—As soon as the patient is received at the hospital or place of dressing the limb is thoroughly prepared by scrubbing, shaving, etc., following the usual plan of the surgeon for the sterilization of the skin. Either general or local anesthesia may be employed. I have used Schleich's solution of cocain and morphin in normal salt solution with satisfaction, although local anesthesia doubtless increases

the dangers of infection. However, no accident has followed.

The instruments and appliances required are few: A broad scalpel, two artery forceps, a set of mounted needles (Pean's full curved, three sizes), scissors, a fine needle and catgut, a bobbin of strong silk, a yard of heavy silver wire (sixteen or eighteen gage), a metal cannula of medium size, sterilized gauze, aristol, bandages, and plaster of Paris.

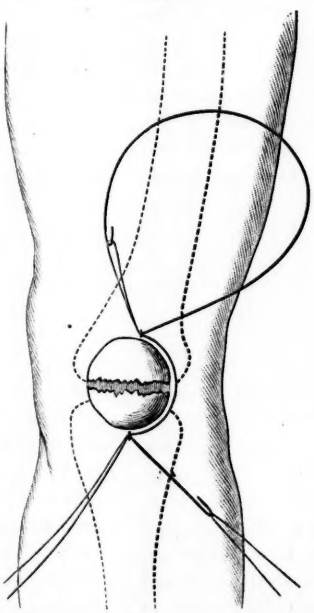
After the usual preparations to secure asepsis have been completed, the limb is fully extended, the surgeon draws the lower fragment of the patella as high as possible, enters the point of the scalpel close to the apex of the bone, and carries it directly inward and upward through the ligamentum patellæ into the synovial sac above the ligamentum mucosum. The scalpel is now withdrawn, leaving a puncture of the joint at its dependent part one-half of an inch in length. This puncture is now covered with sterilized absorbent gauze, and by massage and flexion the joint is practically emptied of effusion through the puncture. Should any difficulty be experienced in removing the effusion, always fluid for several hours after the injury, the metal cannula may be introduced to facilitate its flow. After the removal of the fluid the fragments can usually be brought in apposition. By a little coaxing, bits of membrane or bursa can be removed from between the fragments, and distinct bone crepitus obtained. An assistant now holds the fragments. The surgeon selects a mounted needle, the curve of which is appropriate to the size of the patella, threads it with a loop of strong silk, and passes it in the manner shown in Figure 1. The point of the needle is introduced into the puncture close to the apex of the patella, carried through its tendon laterally, through the aponeurosis at the side into the tendon of the extensor femoris, keeping close to the patella all the time, and is made to present underneath the skin. A touch with the scalpel permits the point of the needle to be reached, and the loop of silk withdrawn. The needle is then removed, and another loop passed in a similar manner on the opposite side. By means of these two loops of silk the silver wire is drawn into postion. (Fig. 2.) The relation of the fragments is now re-examined to determine the absence of tissues between them, and that no tilting exists. When properly adjusted they are steadied by an assistant, while the surgeon, by strong traction on the silver wire, using forceps on each end, buries it in the tissues around the patella and twists it close to the apex. The wire is cut short and buried in the wound. (Fig. 3.) If the process has been carefully followed the fragments will be found in absolute approximation, surrounded and supported by this suture or subcutaneous splint.

FIG. 1.



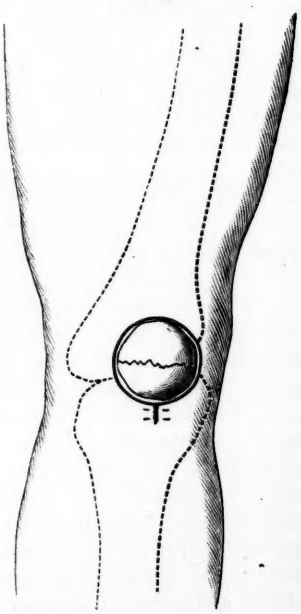
Showing method of passing needle with silk loop.

FIG. 2.



Silk loops in position as carriers for silver wire (shown partly drawn into position).

FIG. 3.



Silver wire in position and buried in the tissues. Punctures closed by catgut sutures.

The punctures are now closed by fine catgut sutures, dusted lightly with aristol, covered with plain sterilized gauze, and the whole limb enclosed in a plaster-of-Paris dressing. The patient is kept in bed with the foot elevated for a week, and carefully watched for any reaction. Afterward he is allowed to sit up, and after two weeks go about on crutches.

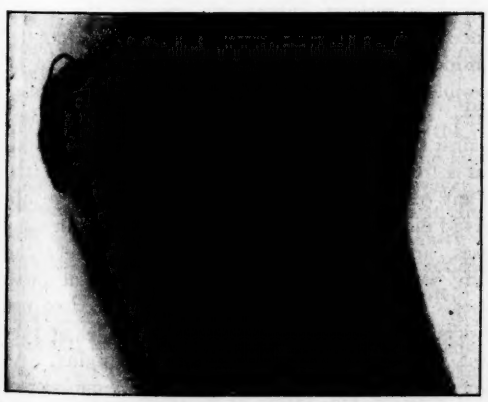
FIG. 4.

Pean needle of proper curve (one-half size).

The dressing is removed at the end of six weeks, and a molded posterior splint adjusted. At the end of twelve weeks all dressings are removed and full use of the limb allowed.

Results.—During the last three years in which I have employed this method exclusively for the immediate treatment of patellar fractures, in all seventeen patients were treated, the majority in the Albany Hospital. Eleven were transverse fractures, 2 stellate, and 4 were cases in which the patella had been sawn through in partial resections or erasures

FIG. 5.



Skiagraph showing a lateral view of the knee-joint after transverse fracture of the patella, treated by encircling suture.

of the knee-joint. No single case of infection followed the operation. The heavy silver wire sutures have never required subsequent removal or have interfered with the function of the joint. Complete or useful restoration of function has occurred in every case of simple fracture, and all of the patients (trainmen, stokers, etc.) have returned to their previous occupations. Two patients were trainmen, a trying occupation for bad limbs. In one case the patient, a heavy woman, some six months subsequent to her first fracture, was thrown from a step-ladder and the patella rebroken. The second time the joint was opened by a free incision and the broken wire removed. In examining the fragments bony union was apparent. Dr. Albert Vander Veer, who assisted at the second operation, was satisfied on that point as well as myself. The patients were operated upon usually immediately after the injury, although in two instances the operation was delayed until the fourth and fifth day. The ages of the patients ranged from twenty-three to sixty-five years. Several of them were very stout, especially the women.

The accompanying skiagraph was taken eight months subsequent to the injury by Dr. William Hailes, Jr. The apposition is satisfactory, bony union is apparent, and there is no loss of function in the knee-joint. This view represents some distortion of the position of the silver wire, which is apparent rather than real. Another skiagraph taken of the same knee at the same time shows the position of the wire suture the same as the drawings used to illustrate the technic of the operation.

The advantages of the method may be said to be:

1. Uniformly good results.
2. Shortened period of convalescence.
3. Freedom from the dangers of sepsis if ordinary skill is employed.
4. Simplicity in the technic.
5. The encysted silver wire suture continues after all dressings are removed to act in maintaining the position of the fragments, and in preventing stretching in fibrous or defective union.
6. Bony union is made possible in all, and does occur in many cases.

A STUDY OF THE RECENT EPIDEMIC OF TYPHOID FEVER AT ST. CHARLES, MISSOURI.[1]

BY H. H. VINKE, M.D.,
OF ST. CHARLES, MISSOURI.

THE following is a brief report of an epidemic of typhoid fever which occurred at St. Charles, Mo., during the past fall and winter. There were upward of 200 cases in a population of 7000, but I have been able to obtain accurate reports of only 161 cases. A few physicians ignored requests for

[1] Read before the Missouri State Medical Society.

reports of their cases, some claiming that such reports are useless, while others seemed to look upon investigations of this nature as impertinent inquiries into their business affairs.

I do not think that in any of these cases the Widal test was made use of to confirm the diagnosis, but the characteristic typhoid symptoms were present in all, and they were observed by experienced physicians. It is undoubtedly true that at the time of an epidemic of this character there is a tendency to look with suspicion upon all continued fevers, and typhoid fever no doubt is at times diagnosticated when really some other disease exists; on the other hand, however, at such a time many atypical forms occur and many irregular cases of this affection are not recognized as enteric fever, simply because they do not follow accurately the course laid down in text-books.

Of these 161 cases, 149 patients recovered and 14 died, a mortality of about 8.7 per cent. Two cases occurred in July, 6 in August, 7 in September, 10 in October, 14 in November, 48 in December, 60 in January, and 14 in February. Eighty-seven cases occurred in males and 74 in females. I have records of 11 cases in children under five years of age, 29 cases between 5 and 10 years, 66 between 10 and 20 years, 27 between 20 and 30 years, 4 between 40 and 50 years, 2 between 50 and 60 years, 1 case between 60 and 70 years, and 1 between 70 and 80 years. The youngest person was 2 years of age, the oldest 75.

Complications and accidents arising in the case of those patients who succumbed were of the following nature: Intestinal hemorrhage in five cases, in patients aged 18, 20, 22, 31, and 33 years, respectively, death occurring on the 14th, 19th, 20th, 23rd, and 28th day of illness. Intestinal perforation and peritonitis proved fatal in 4 cases in patients aged 8, 18, 49, and 35 years, respectively. The patient aged 8 years was a little girl who died rather suddenly of intestinal perforation four weeks after the subsidence of the fever; the other three patients died on the 25th, 21st, and 25th day of illness. Pneumonia was a fatal complication in two cases, in patients aged 18 and 35 years, the first patient dying on the 11th day of illness, the second on the 20th day. Meningitis was a fatal complication in one case, in a patient aged 14 years, who died on the 28th day of illness. Active delirium, ending in coma and death, set in in one case, a patient aged 23 years, who for three weeks had an extremely light attack of typhoid fever. This patient died on the 31st day. One patient, aged 18 years, succumbed to erysipelas, while recovering from a very severe attack of typhoid fever. One patient, an epileptic, aged 14 years, died on the 24th day of illness, of exhaustion. The youngest patient who died was 8 years of age, the oldest 49 years.

Complications and accidents in those who recovered were of the following nature: Intestinal hemorrhage in 9 cases, the patients aged respectively 2, 6, 6, 4, 14, 19, 30, 33, and 35 years. Intestinal hemorrhage was by no means always a fatal or even grave accident; in a few instances it brought the fever to a rather abrupt close, which led to an early and complete recovery. Orchitis was observed in one case, in a patient aged 32 years. Lymphangitis of the left leg was met with once, in a patient aged 26 years, nephritis in a patient aged 42 years, and abscess of the lung in a patient aged 10 years. Peritonitis set in in one case on the 20th day of illness. It was probably not the result of perforation, but in all probability was set up by micro-organisms wandering through the coats of the intestines. Abortion at the 6th month of pregnancy was a complication in one case. The mother made a perfect, though somewhat slow, recovery; the child died 24 hours after birth. The temperature at the time of labor was 102.5° F., and six hours later, 104.5° F. In the patient 75 years of age, the oldest that came under observation, an abscess of the left cornea, resulting in the total disorganization of that eye, considerably delayed recovery; large bed-sores in this case still further tended to render recovery very slow.

Recrudescence was of not infrequent occurrence, but I have a record of only one case of true relapse. It would seem to be difficult to explain why true relapse after typhoid fever ever occurs, for if one attack of this fever lends protection and immunity against subsequent attacks, the occurrence of a second attack immediately after the subsidence of the primary attack should not be possible; and if relapses are really of frequent occurrence they would constitute a powerful argument against the usefulness of serum-therapy. Bronchitis was a frequent complication but did not prove fatal in any case. More or less profuse sweats were observed during the entire course of the fever, in many cases, and sudamina at times covering the entire body were noticed during convalescence in these cases. In many instances the prodromic state was altogether absent, the invasion being sudden and abrupt, and the fever high from the beginning. At times obstinate constipation was very troublesome, and in some of these patients I found an unusually slow pulse.

In most instances the patients were treated by the expectant-symptomatic method. Patients were sponged freely whenever the temperature rose above

103° F., and grave symptoms and accidents were treated as they arose. The result of this particular form of treatment has been satisfactory, for the death-rate was but 8.7 per cent. In four cases, however, Yeo's method (chlorin water with tonic doses of quinin) was used exclusively; of these four, two patients died, one recovered after a tedious illness lasting five weeks, and one made a rapid recovery. Three patients were treated exclusively by the antiseptic or Woodbridge method. I will premise my remarks on the result of this particular treatment by the statement that the number of cases in which it was employed was altogether too small to permit me to deduce any conclusions therefrom, and then, too, I am not quite certain as to whether the ideal Woodbridge treatment was brought into use. Tablets containing podophyllin $\frac{1}{100}$ of a grain, calomel $\frac{1}{16}$ of a grain, guaiacol carbonate $\frac{1}{4}$ of a grain, menthol $\frac{1}{16}$ of a grain, thyol $\frac{1}{16}$ of a grain, and eucalyptol were administered every half hour during the first 24 hours, except when the patient was asleep; after this they were given one every hour during the next two days, and one every 2 hours thereafter.

One of the patients had fever 41 days, one patient recovered after 28 days of illness, and one after 24 days. Such a result certainly does not entitle this form of treatment to the name of abortive. The *rationale* of this antiseptic treatment would seem to be difficult of explanation, for even if the intestinal canal could be rendered thoroughly aseptic or antiseptic, it would be difficult to explain how these antiseptics could reach the blood and the liver, and other distant organs in sufficient strength to kill the bacillus typhosus and the toxins thereof. These micro-organisms, as is well known, are not only found in the intestinal canal, but have been discovered in nearly all the organs of the body, and it does not seem to be settled which particular part of the economy is primarily attacked by them.

There is no reason to doubt that the bath treatment, or the so-called Brand method, offers the best chances for recovery, and is attended by the lowest mortality. It is extremely difficult, however, to overcome the prejudice against the cold bath; then, too, a lack of intelligent nurses in the country will probably render the use of the method impracticable except in rare cases; but there is every reason to believe that the closer we come to the rigid Brand method, the better will be the results. The frequent use of water for washing out and cleaning the mouth, the free administration of water, the frequent thorough and prolonged sponging of the patient whenever the temperature rises above 102.5° F.—in a word, hydrotherapy, in the broadest interpretation of that term, together with careful and intelligent nursing, would seem to constitute the best and safest routine treatment in private practice.

It seems to be pretty well settled that the bacillus typhosus is the sole and positive cause of enteric fever, and that it is transmitted by means of the water ingested, or by foods and drinks mixed with infected water. A realization of these facts caused me to make a careful inquiry into the water used by those attacked by the fever. It must be added that at the very outset of our investigations I looked for some common source of infection. Infected cisterns and wells might readily give rise to sporadic cases of enteric fever but could scarcely explain the occurrence of an epidemic of this disease. No cases of typhoid fever occurred in the immediately surrounding country. I therefore had to look for a common source of infection within the city limits. This inquiry disclosed the fact that 130 of the patients drank hydrant water exclusively or occasionally, either at home or at their places of employment, and 31 drank cistern or well water exclusively, at any rate I have no proof that they ever drank hydrant water, but it is possible that quite a number of these drank hydrant water without recalling the fact.

Our water-works are situated in the very heart of the city and the water is obtained from the Missouri River. We have not a perfect system of sewerage, and sewers have in several instances been built in the most prominent thoroughfares. These sewers carry the sewage directly into the river. In March, 1897, a sewer was built on Clay Street, having connections with St. Joseph's Hospital and several residences in this street. Clay Street is about four blocks above the "intake" of our water-works and empties its contents into the river. The first case of which I have any record occurred on the 6th of July, in a house on Clay Street having connections with the sewer above referred to. I secured records of the stage of the water in the Missouri River at St. Charles from the Missouri River Commission, and these records show that in the fall and winter of 1897 the river was lower than it had been for 15 years. During these months the refuse from the Gas Works (which are located about a block above the water-works) could be detected in the hydrant water by a distinct coal-tar taste and odor, and this circumstance still further confirms the well-known fact that whenever the river is low and the current slow and sluggish, self-purification is slow and imperfect. Here, then, we have a record of an unusually low stage of the river, and a positive history of contamination with the excreta of the first typhoid-fever patient of which we have any report. When we add to this the fact that at least 130 out of 161 patients drank hydrant water, either exclusively or occasionally, the

conclusion that in all probability the hydrant water was responsible for the epidemic would seem to be justifiable. The epidemic began to subside as soon as local rains materially increased the volume of water in the river and after the people had been instructed to drink water only after it had been boiled. I will add here that specimens of water for bacteriologic examination were sent to the Secretary of the State Board of Health from a suspected cistern, a well, and from the river after it had risen. No typhoid bacilli were found and the river water contained less organic matter than the two other specimens. Bacteriologists know how very difficult and tedious these examinations of water are, and that painstaking and careful labor of several months' duration often fails to reveal the bacillus typhosus in water that is known to be infected. Failure to find these bacilli does not prove, therefore, that they are absent.

If it be true that the bacillus of Eberth is the sole cause of typhoid fever, and if it be true that this bacillus reaches the human economy almost exclusively through infected water, the inference that a pure and healthy water-supply would render the occurrence of typhoid fever impossible is inevitable. The question of the greatest importance in connection with the subject is, How can we best secure for the individual, the family, and the community a healthful water-supply? If every individual would drink water only after it has been boiled the occurrence of typhoid fever would indeed be rare. Boiling the water, however, will probably only be rigidly carried out at the time of an epidemic. Dr. Bashore, in a most excellent article on "The Prevention of Typhoid Fever in Rural Districts," which appeared in the *Medical Record* of January 15, 1898, points out how a pure water-supply may be obtained in these localities. The people should be taught that cistern-water is the safest and most wholesome for drinking purposes. Wells are constantly liable to contamination because they admit of the entrance of ground-water, and it has been shown that the bacillus of Eberth retains its vitality for an indefinite period in the soil. The walls of the cistern should be of hard-burned brick laid in a first-class cement in such a manner that they are absolutely water-tight. The cistern should have a capacity of about ten gallons a day for each member of the family for two months. By a properly arranged cut-off the first rain-water should be permitted to escape. The walls of privy-vaults should be constructed like those of the cisterns, and the vaults should be frequently cleaned and disinfected. The construction of these cisterns and privy-vaults should be under the direction of the proper county or city authorities. In large cities the water-works should be under the absolute control of the municipal government. Corporations cannot be relied upon to take immediate steps to improve and correct the water-supply when it has become polluted if such changes and improvements entail the outlay of considerable money. The intake of these water-works should be far beyond a point where contamination by sewage is possible, or, where this is impracticable, the use of effective filtering apparatuses should be made compulsory.

WAR ARTICLES.

NEWS OF THE WEEK.

AUTHENTIC reports as to the health conditions of our men in Cuba are scarce, but from all we can gather there is as yet no reason for apprehension. The cases of yellow fever which have appeared in the army near Santiago have been comparatively few and the disease is of a mild type. Very few deaths have occurred and the vigilance and effectiveness of the medical corps is worthy of warm commendation.

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Santiago is a very hot-bed of yellow fever and the Government has wisely decided that the force necessary to occupy it shall be made up of immunes from our Southern States. Meanwhile the great majority of the troops are being moved back to the hills and camps have been selected with a view to hygienic locations and conditions.

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The care of the yellow-fever patients in and about Santiago has been given in charge of Major Thomas O. Summers of Memphis who has recently arrived there with a corps of twenty-five thoroughly experienced and immune physicians and nurses. This appointment is peculiarly apt as Major Summers is especially well qualified for his work by a practical experience of many years. He was chief of the medical staff at Memphis during the great yellow-fever epidemic of 1878.

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When the medical history of this war shall have been published it will make most interesting and instructive reading, not only for the physician, surgeon, and nurse, but for all who are interested in the running of the machinery that makes or breaks nations. It is practically a trial war in regard to many innovations. For instance, the hospital-ship, or more exactly, the ambulance-ship, has had its first practical trial, and although official reports of the general efficacy of the "Solace" are not yet published, we have it from reliable sources that its value

is beyond the most sanguine anticipations, and by its service many lives have been saved.

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Aseptic and antiseptic surgical methods have been given a fair trial and the success attending them as compared with the results during former wars is as surprising as it is gratifying. It was fully expected that in such a warm, sultry climate as that of Cuba the proportion of deaths to wounds would be enormous, but these expectations, happily, have not been realized. Much credit must be given to the deviser of the plan of having each soldier carry an individual "repair kit." We are assured that many flesh wounds, even though quite serious, when dressed immediately with antiseptic dressings from the wounded man's own emergency case, have healed as readily as a schoolboy's cut finger, without inflammation or suppuration.

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Official reports will no doubt recommend the use of small-bore rifles and high-velocity steel- or copper-encased bullets as the most effective and humane weapons of war. It is conceded that the object to be gained in battle is not the killing of the greatest number of men but their disablement to such an extent that they can fight no more, at least until time enough has elapsed for their wounds to heal. This is the effect of the Mauser and other rifles of this class. The man who is struck receives a clean-cut wound which, while it disables him for fighting, heals quickly and leaves him in a few weeks almost as sound as before. Even when a bone is struck it is not nearly so apt to splinter as was the case when the old Springfield rifles were used.

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The protest made by the *Virginia Medical Semi-Monthly* and other medical journals against the locating of camps on the banks of streams which supply cities or towns with drinking-water, is sound and reasonable and we sincerely trust it will be noted by the War Department. No community in this country would for one day allow a town of 1000 or more inhabitants to empty its sewage and filth into the upper waters of the stream which supplied said community with its drinking-water, and the cases are parallel in the present instance.

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The great number of wounded men as compared with those killed during the action at Santiago has shown the necessity for nurses, and as a result of this experience the War Department is taking steps to provide an extra large number of nurses and surgeons for the Porto Rico campaign.

The gunshot wounds of the one hundred soldiers transported on the "Olivette" from Santiago and admitted to the United States Marine Hospital, Stapleton, Staten Island, July 16, 1898, have been tabulated as follows:

Gunshot wounds, upper extremities	40
Gunshot wounds, lower extremities	29
Gunshot wounds, head and neck	10
Gunshot wounds, chest	5
Gunshot wounds, back	2
Gunshot wounds, penis	2
Gunshot wound, abdominal wall	1

Also the following named injuries:

Sprain of back	1
Contusion of chest	1
Concussion of brain and spinal cord	1

Also,

Effects of heat	4
Enteric fever	3
Inflammation of lymph-glands, groin	1

Among the surgical cases there are compound comminuted fractures:

Of radius	1
Of humerus	1

Compound fractures:

Superior maxillary	1
Radius and ulna	1
Humerus	1
Ulna	1

Also amputations:

Upper third forearm	1
Two fingers	1
One finger	1

Many of the soldiers have malaria and diarrhea.

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As we go to press authoritative information is received by wire regarding the condition of the Spanish sailors held as prisoners at Seavey's Island, Portsmouth, N. H. At present there are only about 250 in the naval hospital. Of these, twenty are suffering from gunshot wounds, and the remainder from bilious remittent fever, intermittent fever, bronchitis, and anemia. Some deaths have occurred, and others are naturally expected among patients who have undergone such hardships as these Spaniards have experienced.

A FEW THINGS TO LOOK OUT FOR IN MANILA.

BY JOSEPH EARLE STEVENS,
OF BOSTON.

To the traveler arrived in the Philippines I would say: "Look out for a Manila northwest wind, especially during the months from June to October," for it rarely comes stealthily stirring the trees without being the harbinger of a typhoon which is making up from the eastward. Not that there are not other things to beware of but that one's ship, one's house, or one's tent generally likes to have previous notice of the approach of squalls.

"Look out for fever in the lowlands surrounding the capital, and, as far as is possible, do not sleep within six or eight feet of the ground," for fevers, both malarial and typhoid, are at home all the year round in the Philippines as well as in other tropical countries, and though the yellow variety is not known, yet the others are insidious enough to bother the strongest. The natives, in order to divorce the floors of their houses from the ground, generally build these structures on posts, leaving a free space of some two yards between the earth and the thresholds of their front doors. The half-castes and foreigners who live in the more elaborate structures in the city or the suburbs desert the ground-floor altogether and use it as a stable for their carriages or a dining-room for hot weather, for there seems to be a dampness, a certain sort of miasma that hangs about the earth, which is the source of much evil, and a commanding officer should think twice before quartering his men in tents pitched on the lowlands of Manila or Cavité. After all the Nipa hut, with its roof of thatch, its frame of bamboo, and its floor of slats is the most rational form of domicile for the Philippines, and temporary barracks for our troops, built up in the fashion of native dwellings, would in any portion of the islands be better than tents pitched on the ground.

Fever is so common among a certain class of foreign residents in Manila that Tom, Dick, or Harry will come into the cool reading-room of the English club, drop down into a chair and say sardonically: "Got the fever again—means another lay off," and while the old-stagers dose themselves with quinin or antipyrin and hang around the office if possible, the newer arrivals buy thermometers, send for the doctor, take ice baths, and either go through a terrific siege, like my friend whose head shrunk so in six weeks that his hats wouldn't fit him during convalescence, or escape with a few days' pull down. In my day it didn't at all pay to lose one's health, either, for there was only one Anglo-Saxon "medico" in Manila, and he had been in the tropics so long that the climate made him forgetful. He would perhaps go into the sick room of a fever-stricken patient whom he had been attending and remark, "Oh, by the way, let's see, what is the trouble with you?" a question which was not always comforting to a sufferer who felt he was on his last legs. But the old residents all knew that when any one's case was really bad there was no cause for complaint and felt easier in being the recipients of such questions as the above than when the sturdy doctor gave them more serious attention.

Colds and dysentery, like fever, are common troubles and it indeed seems curious that the former should be so popular in a hot climate. But such is the case, and the grippe appears to have reached Manila as well as more accessible corners of the world.

It is a great mistake to sleep in silk pajamas in the tropics and new arrivals seem to suffer from colds, more often caught by exposure during the cool hours of the night than at any other time. Flannel sleeping suits are far more sensible than silk or cotton ones and are especially to be recommended, since they absorb the moisture which invariably exudes from the pores of the skin on a warm night and thus protect one from catching cold while he is asleep. Flannel cholera-belts are also most excellent and protect the bowels from drafts of air that often strike home during the dampness of the night or the cold hours before sunrise.

During my whole two years in the Philippines I never suffered from fever or bowel troubles and only twice from bad colds, probably because I took pains to protect myself at night as well as because I was not subject to them.

Smallpox is common in the Philippines and no one thinks anything about it. Nearly all the natives seem to bear marks of the disease and they don't see why they should be vaccinated when they haven't any especial objection to the parent affliction. But any one going to Manila will do well to be vaccinated, since everywhere in the islands he will bump into people suffering from smallpox. There was much of it in the local shipping during the years of my residence in Manila, and the captains of deep-water merchantmen were fearful for their crews. Our office used often to be the scene of a vaccinating-bee, and my partner and I got so proficient that besides doing a hemp business we could take the ink-eraser and some fresh lymph from Japan and inoculate a jolly tar as well as the doctor himself.

Since Manila has been blessed with a good water-supply and big pipes tap the river far up toward the mountains cholera has never made the terrible annual visits it used to in the days when the inhabitants of the capital were wont to use the water right from the dirty river that ran through the center of the town, and when people died faster than they could be buried.

Sprue, that peculiar tropical disease which seems to attack the lining of one's interior and to render it so sensitive that food cannot be retained by one suffering from the malady, is not uncommon in Manila, and is apt to attack certain foreigners whose stomachs are peculiarly susceptible to change of fare. And let him who finds he has sprue get out of the country just as quick as he can, for nothing but a change of climate will effect a cure, and if the trouble is not attended to at the outset the victim will frequently get so weak that he will be unable to get

away at all. In fact, I went out to the Philippines to take the place of a man suffering from sprue and, neglecting to leave in the earlier stages of the trouble, he finally got so weak that he had to be carried aboard the steamer and only fully recovered after a six-months' stay at home. Some may have sprue, leave the islands for Japan or the Pacific coast, and recover from it to come back to Manila, but others are not able to shake it off even by returning home. This irritation of the alimentary canal is an insidious enemy and milk is practically all that a sufferer from sprue can retain within him. Beware of sprue, then, pilgrims to the Philippines, and once you feel those unmistakable symptoms take the first steamer for home.

Sunstroke is apparently uncommon in Manila for one soon gets to respect the sun after a day or two of his attentions. The vital point to protect during one's stay in the direct sunlight is the back of the neck, and a new arrival should be careful about wearing hats that do not shelter this tender region. Practically all of the policemen in Manila as well as the native and Spanish troops wore helmets with extensions behind which fell low over their necks and a sun-hat in the East which is not built with this so-called back verandah has not the protective power it should have. One marvels at seeing many of the natives with their long, thick, straight, black hair, or the Chinese coolies working for hours, hatless, in the vertical sun, but he will do well to marvel rather than to imitate. For letting alone the question of sunstroke it is an admitted fact that over-exposure to the sun is the direct cause of much of the Manila fever.

As the wet season seems, peculiarly enough, to be the healthiest time of the year, so the hot, dry spring months, coming in the lull between the monsoons, are the most unhealthy. Smallpox is particularly active from January to April, and the universal plowing of the soggy rice-fields that comes before the beginning of the rainy season seems to let loose an extra army of fever-germs from the damp soil. In fact some years ago an attempt was made to dig out the old moats surrounding the walled city, filled in with the rubbish of many decades, but so many of the surrounding inhabitants were stricken with malaria or with typhoid that the attempt was abandoned.

In conclusion, the new arrival in the Philippines should guard against fever by sleeping high off the ground, by avoiding an overdose of the sun, and by fighting shy of freshly plowed fields. He should look out for colds and dysentery by sleeping in flannel suits, by wearing a cholera-belt, and by abstaining from too much fruit. He should forestall the attentions of smallpox by being vaccinated before he buys his ticket for the Far East, and above all, at the first suspicion of sprue, he should make tracks for home or the north.

THE WORK THAT IS BEING DONE AT THE UNITED STATES GENERAL HOSPITAL, FORTRESS MONROE, VA.

[Special Correspondence of the MEDICAL NEWS.]

FORTRESS MONROE, VA., July 25, 1898.

IN obedience to orders from headquarters I reported for duty on the morning of July 15th to Major Calvin De Witt, Surgeon United States Army, in charge of the United States General Hospital at Fortress Monroe, Va. Thirty-six years had come and gone since, as an acting assistant-surgeon, I had reported to Assistant-Surgeon C. T. Alexander, United States Army, in charge of the Lawson General Hospital at St. Louis, Mo. Major De Witt received me with as much kindness and cordiality as if he had been an eye-witness of my original entrance as a green boy into the medical service of the United States a full generation ago. At his earliest convenience he showed me his hospital, the various buildings, tents, cooking arrangements, bath-rooms, in a word, everything required for the care and comfort of the sick and hurt soldiers. When upon enquiry, I was told that the entire hospital had been erected in seven days I was simply amazed, and very naturally asked Major De Witt how on earth it had been done. He promptly replied, "Well, we *had to!* And we worked part of the time by electric light."

The patients seem to be doing well as a rule. There are 441 here now. The wounds are for the most part limited to the lower extremities and are from Mauser bullets. Very few seem to be dangerous. Thanks to modern methods, septic wounds and suppuration are conspicuous by their absence. A few cases of mild malarial fever are progressing toward complete recovery. The Mauser bullet-wounds, so far as noted here, seem to be less destructive to the tissues than those produced by the old Springfield rifle-bullet. In the humble opinion of the writer, the medical officers of the hospital originally on the ground have earned for themselves very great honor. For example, on July 13th four acting assistant-surgeons, Drs. Pinkham, Street, Anderson, and McKay, were detailed to superintend the disembarkation of the sick and wounded soldiers, and provide for their care and comfort in the "incipient" hospital. Beginning at 2 P.M., by six o'clock 246 men were all safely and comfortably transferred to their nice, clean quarters, given a bath, furnished with new pajamas, and fed,

in addition to which the history of each had been carefully recorded. On the previous day the four young surgeons had spent their time in preparing dressings, overhauling instruments, and getting things in proper order for hospital service. No nurses had reported for duty, but every patient was seen by one or another of the young men above-named every two hours during the first two days and nights in the hospital. This is a fair sample of the businesslike way things are managed under the master hand of the surgeon in charge.

My attention was called this morning to a case of chorea, the result of shock received in battle without actual wound. The patient lives at 271 Avenue B, New York, and I hope the MEDICAL NEWS will be careful to find out and report his future progress. His name is George W. Bang.[1]

A case of very great interest is that of a private in the regular army. A Mauser bullet entered his neck two inches to the right of the middle line just below the jaw and passing toward the left emerged through the left scapula about one inch from its posterior margin. The wound is perfectly healed, but there is an aneurism which fills the triangles of the neck, and there is motor paralysis of the left arm and complete absence of pulsation in the left radial artery. The patient is a handsome and attractive young fellow, twenty-three years of age, and there is a deep desire on the part of every surgeon here to rescue him if possible from his perilous condition. The result of our efforts will be communicated without delay to the MEDICAL NEWS.

DONALD MACLEAN, M.D.,
Major and Chief Surgeon of Division, United States Volunteers.

THE WOUNDED SOLDIERS AT BELLEVUE HOSPITAL.

ALTHOUGH the number of wounded (twenty-five) now at Bellevue Hospital is too small to allow one to draw final conclusions relative to the surgical results of the battles fought before Santiago, a brief analytical study of the convalescence of these soldiers and the conditions influencing the same may not be without interest. It should be remembered that all were wounded on the first day of the present month, during the first two weeks of which they were treated in the ill-contrived hospitals in or near Siboney. On the 14th instant they were loaded upon transport No. 5 ("Seneca"), which occupied almost one week in reaching New York. The unsanitary condition of the vessel and the neglect to which the men were subjected is at present the subject of official investigation. After four days in the wards of Bellevue we find many of the men daily expecting to be pronounced well enough to take advantage of well-earned furloughs.

The nature of the wounds received can at present be determined only by the patients' accounts and an examination of the existing conditions. The surgeon is able with approximate accuracy to classify them as (*a*) 2 wounds of the skull, (*b*) 3 and perhaps 4 wounds implicating the lung, (*c*) 4 wounds involving the bones or joints, and (*d*) 15 flesh wounds or those in which the involvement of bony or other important structures is insignificant.

The experiment of providing each soldier with an emergency outfit was suggested by Dr. N. Senn, and the results attending its use in the first extensive engagement are accordingly interesting. Of the 21 who had immediate recourse to the outfit, 16 escaped infection altogether, and 5 had more or less suppuration. Among the latter one had a wound of the skull above the eye, from which the bullet was subsequently removed with considerable operative difficulty. But of the 4 who delayed or omitted the use of this dressing, 2 were infected and 2 escaped. When the exposure of these men in the hot and wet trenches, involving a liability to infection almost unsurpassed, is considered, the above statistics cannot be regarded otherwise than a signal victory for aseptic methods. Inquiry as to the first aid supplied by the surgeon shows that 4 men were dressed upon the field without delay, 2 were taken immediately to the first-dressing stations, and there received attention, while 5 others were dressed at the same stations, but not until a variable time (2 to 31 hours) had elapsed, 11 had their first surgical attention at the Division Hospital in from 2 hours to several days, and 3 were not dressed until they reached the general or Red-Cross hospitals.

Subsequent dressings have been applied as the character and condition of the wounds demanded. Some have required daily attention, while others have healed under two dressings.

The present condition of the wounds, taken on the whole, is eminently satisfactory. Fifteen are closed or virtually so, three are clean but not completely filled in, leaving seven which are suppurating. Of the latter, two present a minimum amount of pus, and none is serious save one. This man re-

[1] Inquiry at the address given above elicited the further information that young Bang had been overcome by heat before he went under fire. His own account of the accident is that a shell exploded near him and a fragment passed very close to his right side. Consciousness was immediately lost, and did not return for several days, when he found himself in the general hospital afflicted with violent choreic convulsions. Excepting a slight ecchymotic spot in the dorsal region, no evidences of trauma were found upon him. Since his arrival at home his general chorea has somewhat subsided, but the spasmodic contractions which draw the head violently toward the right shoulder persist, and are apparent even during sleep. He suffers constantly from pain in the upper cervical region, and is excessively nervous and sensitive to unusual noises.

ceived a bullet at the junction of the right seventh rib with its cartilage. It passed through the lung backward and to the right, making its exit three-quarters of an inch behind the middle axillary line and half an inch below the level of the nipples. Prompt use was made of the emergency outfit, and attention was received almost immediately at the first-dressing station. Daily dressings were applied while in the general hospital and thereafter. Pus is now found in the pleural cavity and an abscess of the liver has developed. The patient's temperature is ranging high (104° F.), and his condition is not satisfactory.

OUR PHILIPPINE LETTER.

[From Our Special Correspondent.]

THE MANNER IN WHICH PHILIPPINOS POISON ARROWS—"MALI-MALI"—A REMEDY FOR SNAKE-BITE WHICH WILL NOT APPEAL TO THE FASTIDIOUS.

WITH ADMIRAL DEWEY'S SQUADRON, OFF MANILA, PHILIPPINE ISLANDS, June 17, 1898.

A DISMAL rain has settled down upon the city and the bay, but not even the depressing weather has been able to dampen the spirits of our boys to-day, for the "Baltimore" put out to sea this morning to meet the American transports which are now due from San Francisco. It is hoped that they will arrive before evening, and the marines in the Cavité arsenal and on board the ships in the harbor are full of joyous anticipation and are whiling away the hours by singing "There'll Be a Hot Time in the Old Town To-night."

There was considerable excitement last Wednesday when it was whispered about that Admiral Dewey was going to send a steam-launch commanded by his staff secretary, Ensign Caldwell, past the batteries and up the Pasig River to try to blow up two torpedo-boats known to be hiding there. The "Callao" was to tow the launch to the mouth of the river and there await its return. It would have been an expedition fraught with great danger to every one engaged in it, but Lieutenant Toppen, who was to command the "Callao," and Ensign Caldwell were both fearless and enthusiastic. In perfecting this plan the darkness and the rain were counted on to assist the launch in getting past the batteries and into the river; but the preliminary and possibly unnecessary, reconnoissance of the "Callao" on Wednesday was rightly interpreted by the Spaniards, who in their terror sunk an old transport steamer, the "Cebu," across the mouth of the river, quite regardless of the fact that while they closed the Pasig against the entrance of the launch, they at the same time made prisoners of their own torpedo-boats and rendered it impossible to carry out their plan of making a torpedo attack on the fleet. This they had prepared to do on Tuesday, when they would have been favored by the gale that was blowing, but our ever watchful Admiral sent the "Concord" and the "Callao" to balk their little game.

The local newspapers continue their vituperation of the Americans, and one paper solemnly declares that the recent Spanish victories have completely demoralized us and that President McKinley and his Cabinet are in a state of panic. What these "Spanish victories" were the paper in question does not say, but when the Americans at Cavité, who are many leagues from a truthful newspaper, hear of another "victory" for the Spanish, their hearts leap in their bosoms at the thought that possibly another Spanish fleet has been blown up somewhere. Even the Spanish soldiers are becoming a little doubtful of these stories of disaster to our navy, as I learned yesterday from a fellow correspondent who, in his assumed character of a German sympathizer, manages to keep in touch with the Spanish officers in Manila.

The insurgents have now advanced to a point within sight of the outposts of Manila. Some of these men are decidedly unprepossessing in appearance, and if those people in America who are clamoring loudly for the annexation of the Philippine Islands could spend a short time in the company of these proposed allies and prospective American citizens, they might wonder whether after all the game were worth the candle. To govern these semi-barbarians will not be an easy task, for our weapons will not be those which Spain has used so effectively, her power here having been based principally on her ability to work upon the fear and superstition of the native population through her agents, the priests. The American government has no such agents, and will, therefore, have to depend on other means. In determining this question of government there will have to be taken into consideration the fact that most of the Philippine Islanders are savages who fight with lances and poisoned arrows. I once had the privilege of witnessing the preparation of a number of these poisoned weapons, and as nearly as I can remember the process was about as follows: The poison was made from the bark of two different trees, the names of which I have forgotten. One of the pieces of bark was beaten almost to a jelly, pressed and dried, then moistened and again pressed. Though the man used his bare hands in doing this, he apparently was not injured in any way by contact with the poison. The juice of the bark thus extracted looked very much like pea-soup as it simmered in an earthern vessel over a slow fire. When it had reached the consistency of syrup, a quantity of pulp from the second piece of bark was scraped off and the juice of this squeezed into the syrup over the fire. The juice of the second piece of bark was dark-brown in color and the liquid in the vessel was darkened and changed as soon as the new ingredient was stirred into it. The mixture was then allowed to simmer for some time, until it had attained the consistency of jelly, when it was scraped out of the vessel with a chip and put on a large leaf which had been plentifully sprinkled with ashes. This preparation can be kept a long time without losing any of its strength. To poison an arrow-head a piece of this jelly-like substance about the size of a hickory-nut is warmed and rubbed all over the point, which can be used repeatedly without the poison losing its virtue. The natives also have daggers with sharp-pointed blades about four inches wide and a foot long, which they call *bararaos*. They are very dexterous in the use of this weapon, and

if they can lay hold of an adversary by the hair, they cut off his head with one sweep of the arm and carry it home as a trophy of war.

Among the natives there is occasionally found a peculiar nervous disease called *mali-mali*, the victims of which seem to be impelled by an uncontrollable impulse to imitate the movements of any one they see before them. Sometimes the disease will lie dormant while the victim goes quietly about his work, but if frightened or excited in any way he will immediately begin to imitate every motion of any person who attracts his attention. If a person suffering from this disease becomes angry he shrieks and raves like a maniac, at the same time continuing his mimicking performances. Old women are the most common victims of *mali-mali*, though men are sometimes attacked. Some people believe that the imitation-mania, as it is sometimes called, is always assumed and that the pretended victims can control their antics if they try, as they are often attacked in the presence of Europeans from whom they hope to obtain alms; but there is no doubt that the symptoms of this disease are generally real, and that such a disease exists is certain.

The natives have a strange cure for the bites of snakes and mad-dogs. The first excrement of a new-born infant is carefully preserved and is believed to be highly efficacious as a remedy for snake-bite, but it must be used both externally and internally and immediately after receiving the bite. I have been informed by a physician who has spent many years in the Philippines that fully a quarter of the children of natives die within two weeks after their birth. He expressed the view that this great mortality is probably caused by the impure air which is always found in the lying-in chambers of the native women. No matter how hot the weather, the doors and windows are hermetically sealed, in order to keep out the evil spirit called the *patianac* which, as I explained in a former letter, is supposed to make all sorts of trouble if it can get access to a woman in labor. But the great mortality among infants has probably a deeper cause than this; it doubtless lies in the constitution of the natives, who do not seem to be of hardy fiber, for if forced to suffer from hunger and thirst they soon sicken and die, and fully half of them have some kind of bronchial trouble.

The old Buddhist belief that the soul leaves the body during sleep is shared by the Philippine Islanders, who are very careful in waking a sleeper to do so gradually and by slow degrees, so that the soul may not be called back too suddenly and rudely into the body which it has for a time deserted. No greater insult can be offered a native than to wake him suddenly or to walk over him as he lies asleep. They dread nothing more than to die during sleep, and their worst curse is "May you die sleeping."

The sense of smell is abnormally developed in the Philippinos, and they can tell to whom any article of clothing belongs by simply smelling of it. The manner of kissing practised among some of them is peculiar. Instead of pressing the lips together, they press the mouth and the nose against the cheek of the person caressed and draw a long, deep breath. In asking for a kiss they do not say "kiss me," but "smell me."

The natives fear many things, both natural and supernatural, and in the Island Sámar the huge bats are regarded by them with feelings of awe that are almost reverential. The caves in the mountains are nearly all inhabited by these creatures, and the natives stand especially in fear of what they call "Calapnitan," or the "Lord of the Bats." It is great sport to go bat-shooting, and the great, uncanny creatures are game to the end, hissing and snapping at any person who wounds them. In the daytime they may be seen hanging asleep from the branches of trees, but as soon as night comes on they spread their wings and fly about like great vampires, filling nervous people with horror. Bats suckle their young like mice, and I remember that on one occasion I shot a mother bat who was engaged in feeding her family. The little creatures did not interrupt their dinner but continued to stick to the dead mother until their hunger was satisfied or the milk exhausted.

Food is growing more scarce in Manila every day. Horse meat sells for $2 a pound, and other meat is now a luxury only within the means of the rich. The insurgents took the blockhouse at Meypajo yesterday, and they have succeeded in effectively penning up the Spaniards in the old walled city of Manila, where they are huddled like sheep, all the Spanish families and hospital patients having been brought inside the walls. It is rumored that torpedoes have been placed by the Spanish in the roads leading into the city, but experience has taught the Americans not to fear the Spanish torpedo. If no more serious obstacle than that blocks our way, the taking of Manila will be easy; but there is Admiral Von Diederichs out in the harbor with his fleet of German warships, waiting, like a vulture for its prey, for an opportunity to snatch his "share" of the prize which Dewey won for America.

CLINICAL MEMORANDUM.

SUPPLEMENTARY ANTITOXIN REPORT.

By I. H. LOPEZ, M. D.,
OF PHILADELPHIA.

ABOUT a year ago it was my privilege to read a paper before the Associated Physicians and Surgeons of the Charity Hospital on "The Treatment of Diphtheria with Antitoxin."[1] My report embraced thirty-seven cases and twice that number of children immunized. The purpose of this paper is to supplement my early report with experience I have since had with the remedy in two institutions with which I am associated.

A child was admitted into one of the Homes, October 23, 1897. On November 21st the mother visited the institution bringing with her a jacket which the child subsequently wore. A week later he was taken down with diphtheria. Thirty-five other cases promptly followed, of which thirteen were sent to the Municipal Hospital and twenty-three treated in the institution. Of the first, six died; and of the latter, one. All had received antitoxin treatment, but some of those removed to the hospital de-

[1] MEDICAL NEWS, February 6, 1897.

veloped grave complications, measles, scarlet fever, etc., which broke out in the hospital wards and were the cause of death, as certified in the death certificates. Those sent away for treatment were the first cases that appeared. The outbreak was subsequently traced to the home from which the mother had brought the apparently innocent little jacket. No other cases appeared in this institution until January 18, 1898, when diphtheria developed in a new arrival, one week after admittance. Several other cases immediately followed, so that a widespread epidemic was imminent. In this outbreak none of the children was removed, but all that had been in any way exposed, 110 in number, were promptly immunized. The doses administered ranged from 250 to 500 units according to the age of the child. Four or five of these children had sore throats with small patches on the following day. Each of these and all that had already developed the disease received 1000 units each. The result was a prompt recovery in every instance and no new cases have appeared in the institution since.

About the same time forty-one cases of diphtheria appeared in rapid succession in another institution. All were more or less complicated with measles and scarlet fever. The four initial cases did not receive the serum treatment and all died. The remaining thirty-seven cases received antitoxin treatment and but two died. It is worthy of note that, deducting the fatal cases, without a single exception, the 174 antitoxin-treated cases developed no sequelæ, either those receiving curative or immunizing doses. Thus far the claims made for diphtheria antitoxin, that it is an efficient non-toxic, non-depressant antidote for the poison of diphtheria, have in my experience been fully realized. When given early and in adequate doses, it will promptly check the disease, after which we have only to contend with the damage done before the poison was neutralized. This damage always varies according to the virulence of the absorbed toxins and the length of time they have been permitted to remain unchecked. During the recent prevalence of diphtheria in our city I was enabled to test more fully the merits of antitoxin, and used it fearlessly in every case, old or young, without the least unfavorable symptoms, but with recovery in every instance. On the other hand, I could cite six cases to which I was called only at the last hour and in which the remedy had not been used. In two of these the attending physician had been having cultures made for four or five days without being able to recognize the disease. In three the physicians had had no experience with antitoxin, and feared unfavorable results. In one instance the mother had treated the child for croup with goose grease and molasses. The result in the six cases was strictly uniform—"they sleep with their fathers."

MEDICAL PROGRESS.

Mortality after Amputations.—SCUDDER has recently published some figures (*Boston Med. and Surg. Jour.*, June 30, 1898) showing the mortality after amputations during the pre-antiseptic days, in the transition period, and at the present time. They will be read to-day with interest, even though there is far less of amputating in the military operating-tent than there once was. The columns of figures which, unfortunately, are not mutually exclusive, are as follows:

TABLE COMPARING MORTALITY PERCENTAGES OF MAJOR AMPUTATIONS DONE AT THE MASSACHUSETTS GENERAL HOSPITAL.

	1821–1870	1870–1890	1885–1896
1. Amputation at the Shoulder-joint.			
Traumatic, primary	53.33	50.00	31.57
Pathological	27.27	00.00	00.00
2. Amputation of the Arm.			
Traumatic, primary	19.44	12.19	22.22
Traumatic, secondary	.....	.....	18.18
Pathological	12.50	16.12	11.11
3. Amputation of the Forearm.			
Traumatic, primary	24.13	22.99	6.00
Traumatic, secondary	.....	.....	0.00
Pathological	14.81	14.00	8.57
4. Amputation of the Thigh.			
Traumatic, primary	42.37	47.54	35.21
Traumatic, secondary	60.00	28.50	37.00
Pathological	20.98	23.28	17.55
5. Amputation at the Knee-joint.			
Traumatic, primary	60.00	60.00	50.00
Pathological	36.36	50.00	00.00
6. Amputation of the Leg.			
Traumatic, primary	34.37	27.73	13.66
Traumatic, secondary	36.41	21.43	7.14
Pathological	12.60	13.78	13.55

At the first glance one is rather surprised that there is not a greater difference between the former days and the present, but upon second thought attention is directed to the fact that antisepsis and perfected technic can never avert death from concurrent causes, as so often happens in the pathologic as well as in the traumatic cases of amputation. Then, too, the very fact that amputation is now looked upon as a last resort makes of it an operation for the worst cases only, and the mortality is proportionately heightened. Incidentally these figures are an eloquent testimonial to the work done in that famous old stone building in Boston that knew so well a Bigelow and a Warren long before carbolic acid and bichlorid of mercury came to mark the line between past and present.

The Operative Treatment of Brain Hernia.—MOELLER (*Deut. Zeit. f. Chir.*, vol. 48, p. 23) thinks that the common opinion that a hernia of the brain will probably end in death either with or without surgical treatment ought to be so far modified as to exclude those cases in which there exists a distinct pedicle which has become obliterated during intra-uterine life. Upon such a subject one may operate with a good chance of success, as is shown by a case successfully so treated by him. What the chances in general are is shown by the record of Von Bergmann's clinic in Berlin, where of 23 patients, 3 recovered from operation, 5 died from operative attempts, and 12 died without any surgical measures having been taken. It follows naturally that the prognosis in meningocele is better than that in case of encephalocele, which in turn is better than that in hydrencephalocele.

Tuberculosis of the Penis.—GASTON (*Centralbl. f. Chir.*, May 23, 1898) describes a case of tuberculous ulcer of the penis which had all the appearances of a hard chancre. The history showed, however, that there had been none of the usual manifestations of syphilis, and that the

trouble had existed for seven years; and further, that the patient suffered from tubercular lesions in other parts of the body. Microscopic examination of a section of the growth left no doubt as to its nature, although no tubercle bacilli were made out. The penis was excised and the stump healed well. Lupus subsequently developed in one of the patient's hands.

Strongest Antitoxin for Rabies Yet Discovered.—FRANTZIUS (*Centralbl f. Bacter.*, etc., May 13, 1898) finds that the bile of an animal suffering from rabies differs from the other fluids of the body in that it does not contain poison. Further tests with such bile showed it to contain an antitoxin against rabies more powerful than any form of antitoxin yet described for this disease. This is not a property of all bile, as investigation showed that the normal bile of cattle, sheep, swine, etc., possesses no antitoxic value. This antitoxin in the bile of animals suffering from rabies is therefore developed during the disease, and manifestly for the purpose of protecting the affected animal against the disease.

THERAPEUTIC NOTES.

Ichthyol in Pulmonary Tuberculosis.—COMBEMALE and DESOIL (*Echo Med. du Nord*, April 17, 1898) report that during fourteen months all the phthisical patients in the Charité Hospital at Lille were treated with ichthyol. Observations were made upon 110 patients who were treated with this drug to the exclusion of all other medication for periods varying from one to six months. Pills and capsules of ichthyol were found to be the least objectionable preparations. The daily dose at the beginning of treatment was 1 gram, but this was gradually increased to 4 grams unless diarrhea intervened, which was too strong to be controlled by moderate doses of dermatol. This happened in very few instances. If these doses of ichthyol were quickly tolerated there was a prompt improvement in the general health of the patient, as manifested by the disappearance of night-sweats, a gain in weight and strength, a reappearance of the menses, etc. This desirable improvement rarely manifested itself before the end of a month, and it did not occur at all in two-thirds of the patients. Expectoration was almost invariably lessened in amount and made more fluid, so that coughing was easier.

On the Washing of Eczematous Hands. — UNNA (*Monatshefte für prakt. Dermat.*, June 1, 1898) says that it is quite possible to cure eczema of the hands without compelling the patients to give up their occupation, even though they may be engaged in such work as cooking, baking, bricklaying, or other occupations in which the hands are constantly filled with dust. It is not the washing of the hands which increases the eczema; on the contrary, the careful cleansing of the skin is favorable to the cure of that trouble if the skin is not thereafter exposed to the air or to some other irritant. Hence he makes it the rule that a thorough washing of the hands in such patients shall take place in the evening, and that the skin shall be rubbed with some oleaginous substance and protected from drying by an impervious covering of wash-linen or rubber. In the morning the hands are simply wiped clean but not washed. Before meals the hands are oiled and wiped, or if they are so dirty that washing is unavoidable, they should first be oiled, then washed with soap, and immediately wiped and thoroughly oiled again. In brief, the treatment is included in the two precepts: No washing without a subsequent oily bandage; and the substitution of a thorough evening cleaning of the hands for the usual morning washing.

A Case of Traumatic Tetanus Cured by Intracerebral Injections of Antitoxin. — CHAUFFARD and QUENU (*La Presse Med.*, June 18, 1898) report a case of traumatic tetanus in a lad, aged sixteen, which they treated successfully with injections into the brain of antitoxic serum. Two fingers were crushed by accident. Four days later there was edema and redness, but without pain or fever. Fourteen days after the injury the swelling had not subsided in spite of constant wet dressings, and stiffness of the lower jaw was noticed for the first time. Two days after that as the condition of the patient was growing rapidly worse, a small hole was made with a trephine in the bared skull, 3.5 inches above the right external orbital process, and about thirty minims of concentrated antitoxic serum was injected to a depth of two inches into the brain. This procedure was repeated on the left side. Both wounds were sutured. There was no bleeding or unpleasant symptoms, and the condition of the patient improved. Upon each of the four succeeding days there was made a subcutaneous injection of about 5 drams (20 c.c.) of antitoxic serum and a pint of artificial serum. The patient recovered entirely. During the convalescence there were the common unpleasant effects of the use of large injections of serum, such as pruritus, pains in the joints and muscles, etc.

Serum to Prevent Death from Burns. — TOMMASOLI (*Centralbl f. innere Med.*, June 25, 1898) recommends the injection of artificial serum to prevent death from extensive burns. The patient upon whom this method was first tried died from the effects of his burns, but the second one was saved, after having received injections of from eight to sixteen ounces of the serum daily for a number of days. By experiments upon animals the writer was also able to demonstrate the power of the serum to save life after burns. Two out of six rabbits whose hind quarters were severely burned recovered, while four control animals died. Eight out of ten dogs similarly burned recovered, while the control animals all died. In the light of this rather imperfect experience the writer does not hesitate to recommend the method for further trial.

For Sciatica.—

℞ Pulv. opii, Pulv. ipecac. } aa . . . . gr. xv
Sod. salicyl. . . . . 3 iss
Ext. cascara sagrad. . . . . gr. xxx.

M. Ft. pil. No. XX. Sig. One to three pills a day.—*Richardson.*

THE MEDICAL NEWS.

A WEEKLY JOURNAL

OF MEDICAL SCIENCE.

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SATURDAY, JULY 30, 1898.

DIPHTHERIA ANTITOXIN PATENTED.

WE believe that the information that Behring has not only applied for but received a United States patent for the production of diphtheria antitoxin will come not only as a surprise but also as a disagreeable shock to the readers of the MEDICAL NEWS. On January 11, 1895, a patent was applied for in the following terms: "Be it known that I, Emil Behring, a citizen of the Empire of Germany, have invented certain new and useful improvements in the manufacture of diphtheria antitoxin of which the following is a specification: My invention consists in the production of a substance called 'diphtheria antitoxin' by means of which people may be immunized against diphtheria and people suffering from diphtheria may be cured, etc." This patent after having been several times refused was finally granted June 21, 1898. We learn that more patents have been applied for by Behring and other prominent bacteriologists of Germany for bacteriologic products in which they have made some improvements. Behring's application for a patent is apparently only the beginning of a general attempt by some German investigators to reap direct money reward for any discoveries which they may make or for which they may be able to convince the Patent Office of the correctness of their claims. This new attitude among some who have previously done merely scientific work may turn out to be a matter of great importance. Lest we judge Behring unfairly let us consider what portion of credit belongs to him and what to others for the discovery of diphtheria antitoxin and its application to disease.

Klebs was the first to describe the bacilli in the tissues of those sick with diphtheria, Loeffler to demonstrate their etiologic relation to diphtheria and that repeated injections of them produced immunity. Roux showed they developed in bouillon a substance called "toxin" which caused after injection all the constitutional symptoms produced by the absorbed poisons from the diphtheria bacilli in the pseudo-membranes. C. Fraenkel equally with Behring, repeated Loeffler's experiments and showed that injections of toxins as well as of living bacilli would produce immunity. Meanwhile many following the directions of Pasteur produced in animals immunity to many diseases by cultures or toxins, and Richet and others discovered that the serum from some of these immune animals when injected into other animals conferred immunity. Behring and Kitasato working together were the first to prove that the serum of animals immunized to tetanus contained immunizing substances, and at the same time Behring, Wernicke, and Aronson found the same to be true of animals immunized to diphtheria, and suggested that the serum might be found to be useful in diphtheria in man. A trial of a serum weak in antitoxin on a few subjects seemed to have some beneficial effects. Behring and Aronson in Germany, and Roux in France, now produced antitoxin on a larger scale. To Roux's experiments we owe the first convincing proofs of the serum's benefit. After Roux's reports, and the general use and manufacture of antitoxin, Behring applied in Germany and elsewhere for a patent for its production.

Behring's patent therefore covers much thought out by others, such as the injecting into animals of the diphtheria bacillus (Loeffler's discovery) or of its toxins (Roux's discovery) into horses (Roux's suggestion). Not even Behring would deny that without the use of the diphtheria bacillus no antitoxin could be produced, and that without the use of toxins no high-grade antitoxin could be obtained. From the

above we see that although the first discovery, or at least the first publication of the fact that in the blood of immunized animals there is a substance which neutralizes the diphtheria poison, is and probably should be credited to Behring, yet it is equally true that if Loeffler and Roux had not published their discoveries Behring would in all probability not have made his, and if they had patented them Behring would have been absolutely prevented from making use of his discovery. It is also certain that if Behring had not hit upon this discovery when he did others would have done so, as the principles had been established for some diseases already, and all were being experimented with to determine in which the curative substances would be in sufficient amount for therapeutic purposes.

Behring has strained the intent of the patent law in obtaining an instrument for appropriating to his own advantage the disinterested investigations of scientists who supplied the data and even the suggestion he adopted. They gave their results freely to mankind without a thought that the benefits directly derivable would be restricted for the profit of an individual instead of being freely distributed for the relief of sufferers from a deadly disease. Science herself suffers from an abandonment of the liberal principles which are the glory of her votaries. The whole patent system is by no means secure in public favor, and in proportion as antitoxin proves to be a public necessity, and Behring's gain increases, just so far will he furnish the most powerful argument yet presented for the abolishment of the entire patent law.

If men who have previously been working for purely scientific purposes desire to work instead for money rewards, no one can object so long as they frankly state their purpose at the beginning. To seek applause first for disinterested work and then to grab for a monetary recompense is not creditable. If this change of purpose ever becomes general it will be, we believe, a great misfortune to science and the race. It will subject all scientific workers indiscriminately to the suspicion of being open to the criticism of being possibly biased by personal advantage. Those who are still guided by different and higher aims, will be included in this distrust, and, indeed, be driven to patent all discoveries of new facts, so that those eager for gain may not seize, and, after giving them a practical application, patent and control them. We are hopeful, however, that the best men will still be satisfied with the old rewards of interest in their pursuits, the fellowship of kindred workers, and by the honor and position which come from successful effort. Money brings much that is very desirable, but there are some things too valuable to sacrifice to it. We trust for the good of the sick that this patent will be tested and overthrown in the courts.

PUBLICATION OF SCHENK'S THEORY OF SEX.

THE fulfilment of the widely advertised promise of Professor Schenk to give to the medical world the full details of his theory in regard to sex has been received in almost absolute silence. The original monograph in German and the authorized English translation have scarcely been noticed by the medical press, or even by the daily papers, which devoted pages to the Court Physician some months ago. The celebrated author lends the weight of his testimony, such weight as it has, at least, to the theory of sexualization known as cross heredity. He says the determination of sex is a question of metabolism on the part of the mother; if she is poorly nourished her ova will be so badly developed that they cannot attain to the splendid possibility of becoming male embryos, but are only fitted to grow into females. If, on the other hand, the mother is in a condition of perfect metabolism, it is possible for an ovum to evolve cells capable of forming the parts of a male child.

Schenk believes that he can determine the state of the metabolism of a woman by the examination of her urine. If he finds that there is even a minute quantity of sugar in the urine it is evidence that the metabolism is not perfect, and there consequently is fear that a female child may result if she becomes pregnant. The practical application of the theory consists in so altering the diet of the mother that her metabolism shall be perfect. It is needless to say that the dieting must begin some weeks before fecundation, and must be continued some weeks thereafter, until the sex of the embryo has become well established. In the words of the author, "The treatment consists in giving the mother a highly nitrogenous diet, with fat, and adding only so much carbohydrate as is absolutely necessary to prevent its want being felt."

Schenk says that at present the "wish to have fe-

male children is a desire, for the gratification of which it is not at present possible to give any directions." But, indeed, it is a poor rule which will not work both ways. Why not cut down the albumens and fats and give starches and sugar when daughters are longed for? But what woman will want daughters if they are to be taken as proof of her own decay?

Confirmation of this simple theory may now be looked for on all sides. It is so simple that every materfamilias-elect may put it to the test—eggs instead of oatmeal, butter without bread, and no candy for four months, and the thing is done! Who knows but that another year may see Schenk lunch-rooms in all the department-stores!

THE PERNICIOUS MALARIAL FEVER OF THE TROPICS.

WITH the departure of our troops for active service in the Philippines and West-Indian Islands, and the certainty that we are about to enter upon permanent tropical colonization, great interest has been aroused among the medical profession with reference to the dangers to be encountered by our soldiers in those so-called trying climates. Distance often lends not only enchantment, but fear, especially when connected with diseases of foreign climes.

When the Nicaragua Canal Company inaugurated its work in 1889, so great was the fear of a high death-rate among its employees that extraordinary efforts were put forth in the way of prophylaxis. Nor was this fear unjustifiable; the experiences encountered on the Isthmus of Panama, where "every railroad tie represented a death," the demoralizing death-rate from yellow fever, pernicious remittent malaria, etc., not only among canal employees, but the foreign colonists of Panama and Colon, furnished sufficient grounds for apprehension; and yet the death-rate along the line of the canal from climatic diseases was only seven-tenths of one per cent., a percentage so small as to stagger those who believed that the diseases of the tropics are far more fatal than those with which they are familiar at home.

This low death-rate was the more remarkable in that it did not represent the whole force of men employed, but those actually on the hospital rolls. The climate of Nicaragua deserves large credit for this low mortality, but the policy of the Canal Company was primarily responsible for the good health of its men. While the other departments were weighted down by an abundance of army and navy red tape the administration of the medical department was comparatively untrameled in the hands of the Chief Surgeon. His requisitions were promptly filled and without questions; his judgment on professional matters was considered paramount; his positive orders were simply, "prevent sickness when possible, look after the comforts of the sick, and keep down the death-rate;" his relative one, "as economically as possible." Such liberal orders, such freedom from red tape, unfortunately cannot be attained in our Army, and therefore there must be a relatively larger fatality from climatic diseases; but it would be unjust to charge these results to climate alone. With the exception of yellow fever, tropical dysentery, tropical diarrhea, and the pernicious types of malarial fevers, our troops in the West Indies are not liable to encounter any diseases with which American physicians are not more or less familiar.

Remittent malarial fevers are far more common than the intermittent form; they are more intense in their onset than in temperate zones and require more energetic and prompt treatment, but if intelligently handled, in the vast majority of cases will respond readily to treatment. The most important point for our surgeons to insist upon is the early recognition and treatment of malarial fevers in their various forms. In the Nicaragua Canal hospitals the average duration of cases of remittent malarial fever was five and one-half days; had these patients been neglected in the incipiency of their attacks they would probably have been ill twelve or fourteen days and many deaths would have occurred.

In the tropics a physician does not depend upon small doses of calomel and quinin, nor can he wait for the action of a cholagogue before administering the last-named drug. An active sudorific, followed at half-hour intervals by three 10-grain doses of quinin, which in turn should be followed within two or three hours by a large dose of calomel, rhubarb, and soda, will nip in the bud most cases of remittent fever, so that a daily dose of from 20 to 30 grains of quinin for three days thereafter will be followed by convalescence.

Far more dangerous to the patient than yellow fever, is pernicious malarial fever, especially in the form known as malarial hematuria. This undoubtedly is the disease known as the "black-water fever" in Africa, and a careful perusal of its history will, I believe, show that the administration of quinin, contrary to the report of Koch on his recent trip to Africa, has nothing to do with its production. Those familiar with malarial hematuria in our Southern States and Central America know that generally the hematuria antedates administration of the drug, and disappears when the patient is thoroughly cinchonized. If the milder forms of remittent fever are early recognized and promptly treated, the pernicious forms will not be encountered, for it seldom develops as a primary form; there is always a history of recurring, and generally neglected, malarial attacks, and seldom does it develop in a new arrival in the tropics.

The statement that "malaria, even untreated, in any single attack is a self-limited disease, and successive attacks are milder and milder," unfortunately will not prove true in the West Indies. On the contrary, immigrants from northern climes if properly treated during their first, second, and third attacks of malarial fever, show greater resisting power during the second, and seldom have more than the three attacks. If neglected, each successive illness becomes more severe, and finally they develop the dreaded pernicious type.

Pernicious malaria occurs only in those persons who have been a long time subjected to slow malarial infection, without the proper administration of quinin. So closely does the appearance of the patient resemble that of one with yellow fever that superficial observers have named the disease "highland yellow fever." The distressing symptoms are hematuria, intense nausea and black vomit, extreme thirst, frequently repeated chills of a congestive character, and, at times, sinking turns amounting almost to syncope. The remaining symptoms are those common to other cases of remittent fever; like yellow fever it has an algid, icteric, and hemorrhagic variety. In the algid form there is a marked difference between the rectal and sublingual temperature, amounting at times to 3° F. The treatment of this disease must again be different from that of the mild forms of malarial fever. Promptness, energy, and unremitting watchfulness are desiderata without which the patient will be lost.

Much discussion has lately taken place as to the advisability of administering quinin in these conditions, but I believe the preponderance of evidence to be in favor of immediately thoroughly cinchonizing the patient by hypodermatic doses of quinin and establishing free diuresis and catharsis. In a majority of these patients thorough cinchonism will be evidenced by fall of temperature and amelioration of other symptoms.

Prophylaxis against tropical malarial fever in our camps should consist of changing the clothes before retiring as night, (unfortunately often impossible), avoidance of constipation, and a daily ration of quinin, to which whisky should be added when the subject has been exposed to rain. Sleeping in shacks or in tents with the sides open, and as far as possible selecting for camps high sites exposed to wind and sunshine should be encouraged. Hammocks should be swung at least three feet from the ground; in more permanent locations beds constructed of split limbs of trees are better than hammocks. Mosquito-nettings should always be used, and as the mosquito of the tropics is often smaller than his fellow of the North, a very fine mesh is indispensable. Add to these precautions a careful, systematic medical supervision of water-supplies, kitchens, and diet, a daily inspection of each company by a medical officer, and, finally, rejection at recruiting-stations of men with positive histories of malarial infection, and the invaliding home of all patients who respond only temporarily to treatment and this bogey of the tropics will be robbed of half its terrors.

J. EDWARD STUBBERT, M.D.

ECHOES AND NEWS.

Marseilles Hospitals.—M. Louis Salvator, a resident of Marseilles, has bequeathed his entire fortune amounting to nearly $1,500,000 to the hospitals of that city.

A New Dean for Johns Hopkins Medical College.—At the beginning of the next collegiate term, Dr. Welch will resign his position as dean in favor of Dr. Osler.

Prevention Cheaper than Cure.—*The Hospital* is authority for the statement that the recent epidemic of typhoid fever at Maidstone, England, cost the taxpayers of that village $85,500.

The London Hospital Bazaar.—The bazaar recently held

in London for the benefit of the London Hospital, realized the enormous sum of $100,000. It was held at the Hotel Cecil and lasted two days.

Red-Cross Nurses.—Since General Sternberg has given his consent to the employment of Red-Cross nurses in the military hospitals the society has been most active in supplying nurses, both male and female, experienced and inexperienced, immune and non-immune.

A New English University.—For some time past the establishment of another university to be located at Birmingham has been agitated. It has recently received an endowment of nearly $500,000. The proposed university is to be known as the Midland University, and will include a college of medicine.

Honors to Nurses.—The eleven nurses who devoted themselves to succoring the typhus-stricken peasantry of Inniskea, Ireland, during the epidemic of 1897, have, by the sanction of the Queen, been enrolled Honorary Serving Sisters in the Grand Priory of the Order of the Hospital of St. John of Jerusalem in England.

Medical Department of the University of Denver.—The following professors have recently been appointed in the faculty of the above-named institution: Dr. Carroll E. Edson, professor of therapeutics; Dr. Hobart E. Warren, associate professor of anatomy in charge of the department; Dr. T. J. Gallaher, professor of laryngology and rhinology, and Dr. I. B. Perkins, clinical professor of gynecology.

The Royal Army Medical Corps.—Owing in great measure to the commendable efforts of Lord Lansdowne, the medical service of the British Army has at last received rank and recognition somewhat in accordance with its relative importance and merit. It will henceforth be placed beside the Royal Engineers and Royal Artillery, and the hope is expressed that it will now attract candidates capable of sustaining the former prestige of the service.

Typhoid in the Camp at Jacksonville, Florida.—Regarding the slight outbreak of typhoid fever in the Seventh Army Corps, Colonel Maus, the chief surgeon, says that no local causes had anything to do with the disease in any of the cases. The Virginia and Mississippi regiments were infected by the water at their State camps respectively. One company of the Illinois Regiment partook of tainted meat and the men were doubtless poisoned thereby.

The Memphis Lancet.—Number 1, Volume I. of this journal for the month of July, 1898, is duly received. While Memphis was previously the home only of the *Memphis Medical Monthly*, the *Memphis Lancet* is a welcome addition to the family, and hereafter Memphis will have two medical journals. The *Lancet* starts under the most flattering auspices and promises to take a high place in the estimation of the profession.

History of Medicine.—At the Congress of Scientists and Medical Men, which will hold its next regular meeting in Düsseldorf September 19th to 24th, it is intended to have an exhibit illustrating the general history of medicine. Medical antiquities from Phenicia, Egypt, Babylon, and Medo-Persia, from Troy, Greece, Japan, China, India, Etruria, ancient Rome, as well as medieval and modern Europe will be so arranged as to present a complete panorama of medical progress since the dawn of civilization.

Medical Education for Women in England.—English opinion as to woman's proper share of the fruits of the tree of knowledge is indicated by the fact that science laboratories for the London School of Medicine for Women have been constructed by public donations and opened for use. The dedication exercises were presided over by Her Royal Highness the Princess of Wales, who, as *The Hospital* says, stands in the eye of the British public as the representative of all that is pure and true in womanhood.

The Hospital-ship "Relief."—The hospital-ship "Relief," which arrived in New York Harbor on the 23d inst., presents a striking contrast to the condition on board the "Seneca" which preceded her. On the "Relief" every detail was perfect, every patient was provided with a cot, and there was an efficient corps of trained nurses and surgeons and an abundant supply of medicines, appliances, and delicacies, in fact, everything that a hospital-ship should have for the care and comfort of the Nation's sick and wounded.

To Honor Joseph O'Dwyer and to Commemorate His Work.—At a meeting of the section of the American Medical Association on the Diseases of Children, at Denver, Colorado, June 7–10, 1898, by unanimous vote, a memorial committee was appointed with suitable powers to collect money in conjunction with other similar committees, for the purpose of commemorating the life and work of Dr. Joseph O'Dwyer. The committee is composed of Dr. Louis Fischer, New York, Chairman; Dr. J. P. Crozer Griffith, Philadelphia, and Dr. F. E. Waxham, Denver, Colorado.

Medical Advice by the Clergy.—The Roman Catholic Bishop of Augsburg, Germany, has recently made a communication to the clergy of his diocese on the increasing tendency of the clergy to give advice in cases requiring medical treatment—a practice which he condemns and charges that it be avoided. The action of this bishop is the more pertinent, since the home of the late Father Kneipp and his successors is within his diocese. Would that the American clergy, both Catholic and Protestant, might receive a similar rebuke and that their penchant for quack nostrums might be forsworn.

Accident to the Prince of Wales.—A strong undercurrent of apprehension is said to exist in England regarding the ultimate result of the fracture of the patella recently sustained by the Prince. The condition of his heart and kidneys renders the use of anesthetics dangerous, and the mistake of sending him by slow train up to London from the country seat where the accident occurred permitted the capsule of the joint to become so distended with blood as to prevent approximation of the fragments

of the patella except by radical procedures. Fears are expressed that the Prince will always be lame.

Condition of the Yellow-Fever Invasion. — At the present writing not a single case of yellow-fever exists within the boundaries of the United States, and it is a remarkable fact that not a single case has appeared among either the prisoners or the soldiers who have been brought back from Cuba. General Shafter reports that there are 1896 soldiers in the hospitals about Santiago, and that of these about 150 have yellow-fever. The disease, however, seems to be very mild in character, and the few deaths which have occurred in his army have been due more to typhoid fever and intermittent fever than to anything else.

Responsibility for the Transport "Seneca."—The reports regarding the condition of the "Seneca" which recently arrived in New York Harbor with 125 sick and wounded soldiers from Santiago has aroused great indignation in all quarters. The ship-surgeons and nurses report that they were almost destitute of proper medical and surgical supplies, and were only able to care for the sick and wounded by the most ingenious makeshifts. Surgeon-General Sternberg has ordered an official investigation based upon these charges, so that we shall soon know the exact truth in regard to the condition of the ship and the supplies on board, as well as to be able to fix the responsibility where it rightly belongs.

Dr. Donald Maclean of Detroit, Michigan, who recently received an appointment as Major and Chief Surgeon of Division in the Volunteer branch of the service writes most interestingly in this number of the MEDICAL NEWS on the facilities at Fortress Monroe, Va., for the care of the sick and wounded soldiers from the front. As a former President of the American Medical Association, and as former Professor of Surgery at the University of Michigan, Dr. Maclean's circle of friends in the profession is probably second to that of none in this country, and it cannot but be a source of satisfaction that under his skilful supervision the men who have been wounded in their country's cause will receive the care and attention which they so justly deserve.

A Correction.—Our attention has been called to a statement in our "Philadelphia Letter," published in the issue of July 9th, in which the Baltimore Medical College is apparently accused of improper practices. This is an error for which we tender apologies. It is due to the fact that the article *the* was used instead of the article *a*, and should read, *a* Baltimore medical college. We are assured by our correspondent that the circumstance as described is true in every particular, and that *a* Baltimore college is the culprit. We regret the oversight by which an apparent stigma was placed upon a most worthy institution. The Baltimore Medical College is a member of the American Association of Medical Colleges. With the year beginning October 1, 1898, a four-years' course will be required for graduation.

The Increase of Suicides in Italy.—Suicide in Italy has greatly increased during the last few years. In 1897 the increase, compared with the ten preceding years, was more than 50 per cent. The total number of suicides for that year was about 2000, which corresponds to a "voluntary mortality" of 6.41 for every 100,000 inhabitants. Of this total 1404 were men and 596 were women. Married persons numbered 810, unmarried 949, widowers 177, and widows 61. The greatest number of suicides took place in the three months of spring and those of summer, being respectively 614 and 572. Professor Lombroso attributes the increase in the number of suicides to the greater difficulties of supporting life, to burdens which weigh each day more heavily upon the country, and to despondency caused by the utter hopelessness of the future.

The A. M. A. Code of Ethics.—Dr. W. O. Bridges in his recent presidential address before the Nebraska State Medical Society expressed the following sentiment: "I must dissent from the opinion expressed at the semi-centennial of the American Medical Association in the presidential address of our distinguished surgeon, Dr. Senn, when he said the code of ethics was the bulwark upon which was founded the Association, and that without it disintegration and collapse would follow. I cannot believe, nor do I want to believe, that a written code of morals is essential to the life of an organization made up of such men as are active workers in such an association. One of the best working societies in this country, and one which takes a more active part in public matters than any other, has already abandoned a code of ethics framed upon a liberal basis and is now working without any code at all." The *Western Medical Review* congratulates Dr. Bridges upon his courage in promulgating this sentiment, and declares he was only expressing the private views of a very large majority of the Society over which he was presiding.

The Playfair Dinner. — Upon the recent retirement of Dr. Playfair from the active staff of King's College Hospital he was made the recipient of a complimentary dinner, Lord Lister presiding. In his response to a toast drunk in his honor, he said: "When on leave of absence from India I noticed an advertisement in the medical journals for the post of assistant physician-accoucheur to this institution. My application was sent in, and I determined if elected to become an obstetrician. No more was thought of the matter until an intimation of my appointment was received, when I found myself confronted by two duties. One was to find out where the hospital was situated, and the other to learn something about obstetrics." Touching his now celebrated trial he departed from his determination never to mention it, especially in public, so far as to assure his hosts that all annoyance and distress connected therewith were more than counterbalanced by the warm symphathy he had received from the profession, his patients, and even from persons with whom he had little or no personal acquaintance. Among the manifestations from the latter was a letter from the late Mr. Gladstone commending the line of action he had taken.

CORRESPONDENCE.

OUR FOREIGN LETTER.

[From Our Special Correspondent.]

DOCTORS' DAY AT WIESBADEN — THE QUESTION OF WOMEN STUDYING MEDICINE AS GERMAN DOCTORS SEE IT — PROFESSORS LEYDEN AND GUSSEROW CONCERNING PREGNANCY WITH HEART DISEASE — AN ANATOMIC FOUNDATION FOR SOME PHASES OF PHYSIOLOGIC PSYCHOLOGY.

BERLIN, July 20, 1898.

UNDER the presidency of Sanitäts Rath Aub of Munich, "Doctors' Day," the occasion upon which the representatives of German medical societies meet to discuss subjects of interest to the doctors personally, in contradistinction to the meeting of societies to discuss scientific medicine, was held this year at Wiesbaden, June 28th and 29th. The relations of medical men to life-insurance companies were discussed, but from standpoints not of interest to American doctors generally. Somehow the impression one gathers from it is that the regulations now demanded by the physicians as regards fees, examinations, etc., are such as the liberal progressive policy of our great life-insurance companies introduced into the routine of business methods years ago.

A very interesting discussion, however, was that on the question of women studying medicine, which has been looked forward to with a great deal of interested anticipation by German medical men generally. The opening of the discussion had been referred to Professor Penzoldt of Erlangen, who evidently represented German medical opinion on the subject very well, since his conclusions in the shape of a thesis were adopted as the expression of the sentiments of the meeting by a large majority.

Professor Penzoldt is opposed to opening the doors to women for the study of medicine at present and states his reasons very forcibly. The demand for the privilege comes from two sources—the desire for equal rights and the wish to open up new vocations to women. As far as equal rights in education are concerned, he considers that what the world needs is not educated or half-educated women, but women healthy mentally and bodily, to fulfil the duties of wife and mother, which must remain for the vast majority of women the ideal and happiest vocation. He hopes that in this present women's movement this will not be lost sight of and future generations will have the precious privilege of knowing "*the genuine German woman.*" As to new vocations for women they are needed, but medicine must not be the first. It is extremely unsuitable, difficult and toilsome, and its rewards are small and slow for the majority of practitioners. Every one thinks he or she knows a little medicine, and thinks it will not be hard to learn more, but this is the veriest illusion. Women have shown themselves capable of pursuing university medical studies, but their success seems due to greater industry than men and to better memories, and very little can be hoped for from them as scientific investigators. They overdo the work. In practice they are much less successful than men and the few exceptions who have succeeded in making a successful career for themselves, are the pick of the sex who really prove the rule of woman's much less adaptability to practise medicine than men.

Medicine requires too much work, too long study, too great expense, too much preparatory education for woman. Other callings in the commercial and industrial worlds pay better, are easier, and are not so demanding. In the medical line, perhaps, the callings of dentist and apothecary may be suitable for them. As an outlet for their natural feelings, which is sometimes spoken of as a reason for their studying medicine, there is open to them the occupations of trained nurse and midwife. Much might be done to raise these callings to a higher plane of usefulness and lucrativeness, if a better class and better educated women would enter them, and especially is this true for midwives.

As to the objection sometimes raised, that women suffering from genital affections do not care to apply to a male physician until serious symptoms develop and then it is at times too late, or at least only recourse to the knife is possible, he said German doctors, as a rule, are too careful of the feelings of their patients for this to be true, and the doctors to whom such an objection would apply are fast disappearing. The real difficulty in this matter, as Professor Müller pointed out, is (1) that gynecologic affections begin so often with insidious symptoms; (2) that women are often careless of initial symptoms, and (3) that they fear to know the truth and dread the operation that may eventually be necessary. Professor Penzoldt's conclusions which by vote became the resolutions adopted by the meeting are: I. "If the privilege of practising medicine should be allowed to women under like conditions as to men (this not to include, however, the opening of schools to them), then under present circumstances there is no reason to think that there would be a rush to the profession. II. If, however, because of circumstances and conditions not foreseen at present, there should come such a rush, there would result therefrom (1) no special benefit to patients; (2) more harm than good to the women themselves; (3) least of all can any benefit be looked for from such a movement for the German universities or for scientific medicine; (4) the present position of the profession in the eyes of the public would certainly suffer from it; (5) no furtherance of the general good can be expected from it."

In addition to these resolutions the following from Dr. Reich of Breslau was adopted: "The preparatory education of women admitted to practise medicine must be the same as that of men and their requirements for examinations must be the same." There must be no question of women being allowed to neglect the study of general medicine to apply themselves to special branches. Notwithstanding the serious opposition, then, there is in the tone of the resolutions adopted something that indicates that it will not be long before women will be granted the privilege to practise in Germany as they have within the year been allowed in Austria and Hungary. I have stated before that the tendency in this direction is evident, and that the granting of the privilege is a matter of the near future. I see no reason to change such views in the face of the opposition so generally ex-

pressed at the meeting. The resolutions are the last protest of the conservatives against the inevitable and contain in themselves the acknowledgment of that fact.

At a recent meeting of the Charité Arzte (the Society of physicians and surgeons of the Charité Hospital) there was a renewal of the old-time discussion between Professors Leyden and Gusserow as to the question of valvular heart disease and pregnancy; that is to say, Professor Gusserow read a paper on the subject, and it was discussed by his own and Professor Leyden's assistants, Prosessor Leyden being unavoidably absent at the banquet celebrating the tenth anniversary of the Emperor's coronation. The same question was discussed four years ago and since then has been the subject of special attention on Professor Gusserow's part. He has had seventy pregnant patients with valvular lesions, but four cases proving fatal, forty-six of the women carrying their children to term. This is very different from the statistics of the clinicians who claim that fifty to sixty per cent. of these cases are fatal. Such statistics are evidently due to the fact that the internists see only the severest cases and their conclusions cannot form a rule for the practitioner.

As to abortion for failing compensation Professor Gusserow has found artificial termination of delivery much more dangerous than natural delivery and spontaneous abortion of much more favorable prognosis than that brought on. He thinks that Nature will in nearly every case bring about abortion herself if it is necessary. Meantime the judging of the indications for abortion is most difficult as states of disturbed compensation supervene at times that seem to be surely fatal in tendency yet recovery ensues, and badly disturbed compensation at the beginning of pregnancy may be followed by comparative well being later. In the discussion it was evident that Professor Leyden's opinion has been modified, and while still thinking the condition serious he does not judge quite so badly of it as before.

A recent meeting of the Berlin Physiological Society was taken up by a series of stereopticon demonstrations of Nissl preparations of brain cortex of various animals by Dr. Schlapp of Fort Madison, Iowa. Among them were some entire sections of the human brain in frontal and longitudinal directions, the first entire sections that have been prepared by this method. They give with low power excellent pictures of the various cell-layers of the cortex and a chance to compare parts of supposedly various function with each other. One fact becomes clear from this general view, that the opinion expressed by some anatomists, that the passage from cortex composed of a certain number of strata or cell-layers to one made up of more or less in number is always a gradual not an abrupt one, is not true. This abrupt transition can be found wherever motor passes into sensory cortex and seems to be especially marked where the optic region begins. A very definite stratum cell-layer exists in this region and the limits of this seem to form an anatomic basis for what so far has been known merely physiologically.

Henschen claimed that the optic region in human beings occurred only in the convolutions lying along the calcarine fissure. Manaco claims that not alone the internal cortex in the longitudinal fissure presides over sight, but that the external cortex of the posterior part of the occipital lobes is associated in this function. These new investigations seem to furnish a scientific basis for saying just what the limits of the optic region are. The characteristic layer cell formation in the cortex of what is known to be the optic region extends beyond the limits marked by Henschen, but never reaches the extent demanded by Monaco's theory. It ceases just where the internal cortex of the longitudinal fissure turns to become the external cortex. In monkeys whose optic region has been shown by Munk physiologically to exist also on the external cortex the characteristic cell-layers run over here. In other animals, as the *pteropus*, the flying-fox of South America, and the horse, it can be demonstrated that other sensory regions, especially those of hearing and smell, have a very definite cortical character in the peculiar arrangement of their cells, which enables the anatomist to very definitely point out their limits. This anatomic basis for physiologic functions of the brain cortex has long been sought in vain, and there are in the cellular arrangements of the cortical layers of the frontal and parietal lobes certain hints at an anatomic substantiation of some of Flechsig's speculations as to association centers that seem to make them of still further interest for physiologic psychology.

OUR PHILADELPHIA LETTER.

[From Our Special Correspondent.]

PRECAUTIONS AGAINST YELLOW FEVER—ARMY APPOINTMENTS—PERSONAL NOTES—NEW HOSPITAL BUILDINGS—MEETING OF THE STATE BOARD OF HEALTH—ANOTHER "FAITH-CURE" DEATH—A DIPHTHERIA OUTBREAK—HEALTH STATISTICS.

PHILADELPHIA, July 27, 1898.

WHILE no alarm is felt by the authorities regarding the recent outbreak of yellow fever among the troops at the front, the local health board has determined to be prepared and with this view arrangements have been completed for a house-to-house inspection along the Delaware River front. Chief Nuisance Inspector Kennedy has a corps of twenty assistant-inspectors, and to this number have been added fifteen assistant medical inspectors who will have the matter in charge. Governor Hastings has also given the subject attention, and on Wednesday of last week held a conference with Dr. Benjamin A. Lee, Secretary of the State Board of Health. The Governor directed Dr. Lee to take every precaution necessary to prevent the introduction of yellow fever into any Pennsylvania port.

Dr. Edward Martin, recently surgeon to the Third Pennsylvania Regiment, has been promoted to brigade surgeon with the rank of Major. His place in the Third Regiment has been taken by Dr. Archibald G. Thomson, a son of Dr. William Thomson who was chief of the medical staff of the Army of the Potomac during the Civil War. Another army appointment is that of Dr. John A. McKenna who leaves this week for Falls Church,

Va., having received his commission as Acting-Assistant Surgeon, United States Army. Dr. J. C. Da Costa, Jr., who is also stationed at Camp Alger, was in Philadelphia a few days ago on a week's leave of absence. Dr. Joseph Sailer, formerly pathologist to St. Joseph's Hospital, and a member of the staff of the Pepper Laboratory of the University of Pennsylvania, has been commissioned Passed Assistant Surgeon in the Navy, and has been assigned to duty on board the "Arctic." John B. Scott, a third-year medical student in the University of Pennsylvania and President of the Houston Club, died July 15th, having been home a few days from the auxiliary cruiser "St. Paul," on which he had served from the time she was commissioned by the Government.

At a recent meeting of the National Relief Commission held in Philadelphia, Dr. M. S. French, the secretary, read letters from every hospital in the city offering the use of their wards to the wounded of the Army and Navy. Letters in reply were read from Surgeon-Generals Sternberg of the Army and Van Reypen of the Navy in which they stated they would gladly avail themselves of this generous offer should occasion arise.

Among the names on the passenger-list of the Bremen steamer "Bremen," which sailed last week, were those of Dr. W. Esterly Ashton and his brother, Dr. Thomas G. Ashton. Dr. W. W. Watson, Professor Pfromm of the Medico-Chirurgical College, Drs. A. A. Apple, Paul Bartholow, and E. Sajous are at Atlantic City. Dr. J. Chester Morris is at his summer home near West Chester, while Dr. Joseph S. Neff is in the Adirondacks, Dr. Henry C. Chapman at Bar Harbor, and Dr. W. B. Atkinson at Asbury Park.

The Board of Trustees of the Medico-Chirurgical College has elected Dr. Robert S. Nones Dean of the Dental Department, and Drs. Walter H. Neall and James D. Price Adjunct Professors. A new ward to be known as the "Dulles Ward" is to be added to the Presbyterian Hospital. The plans call for a building two stories high, 40 x 48 feet, granite at the base with the upper part of brick, red stone, and terra cotta. The building is to be furnished throughout with steam heat and electric light. Another hospital building to be erected soon is the Ayre Memorial Building for the Pennsylvania Hospital. It will be similar to the Garrett Memorial Building, colonial in style, two stories high, and measuring 26 x 70 feet. It is to be used as a clinical laboratory in connection with the hospital, and the plans specify its completion January 1, 1899. The funds were bequeathed by the late Mrs. Josephine M. Ayre supplemented by a gift of $25,000 from her son, Frederick Ayre of New York.

The Pennsylvania State Board of Health met a few days ago at Swiftwater, Monroe County, in response to an invitation from Dr. Richard S. Slee, assistant bacteriologist of the Board. Dr. Benjamin S. Lee, secretary, read the report of the Schuylkill Investigation Committee, in which he said that at Plymouth Creek pipes conveying sewage were found emptying into the river, which presented the appearance of indigo-blue mixed with tar, and had an odor so bad as to compel the committee to turn away. From this point all the way to Bridgeport the water was thick with decaying vegetable matter and refuse thrown from the houses, the stench therefrom being almost unbearable. The farther up the river the committee went the worse became the conditions. At places no means whatever were taken to prevent household drainage and human excreta from entering the water, but apparently nothing was left undone to perfect arrangements for the conveyance of such matter to the river, all seeming to consider it a common receptacle for that which might cause disease if allowed to remain on land. At Pottstown, which for many years past has been considered one of the chief sources of pollution, privies have been erected on bridges or platforms over the water for the Hungarian population living along the banks. At Birdsboro nearly all the houses were found to drain directly into creeks which empty into the Schuylkill.

As a result of the report, of which the above is but a sample, the city of Philadelphia will unite with the State Board and other Boards of Health throughout the State in making a demand upon the Legislature for the passage of adequate laws for the protection of the purity of our streams. What is evidently so necessary in Pennsylvania suggests that similar sanitary reforms should be instituted in other States where investigation may reveal equally flagrant abuses.

After listening to the report the Board inspected the Pocono Biologic Laboratories, to which contracts for vaccine virus have been awarded by Surgeon-General Sternberg of the Army and the Philadelphia Board of Health. Dr. Lee said it afforded him much pleasure to say that Pennsylvania has two of the finest biologic laboratories in this country. The following gentlemen compose the board for next year: President, Dr. George G. Groff; secretary, Dr. Benjamin Lee, and Drs. John Fulton, James H. McClelland, Samuel T. Davis, and Richard Y. Cook.

The coroner's inquest in the case of an infant, aged fourteen months, who died last week of meningitis, revealed another death due to the negligence of "faith-curists." The child was taken ill on July 11th, but a physician was not called in until the 15th. Notwithstanding his warnings, the mother failed to give the child the medicine prescribed, and death occurred two days later. Certainly such negligence on a mother's part should be regarded as criminal, and a curb put upon the freedom from punishment which this cult enjoys.

An unusual number of deaths have occurred during July as a result of the excessive heat, and heat prostrations far exceed the record. Dr. J. Howard Taylor, Chief Medical Inspector of the local Board of Health, has been investigating the sudden increase in the number of cases of diphtheria, as shown by last week's report. He is of the opinion that no serious alarm need be felt, as the cases are of a mild type, and the number of cases is already on the wane. The most unusual feature of the outbreak is the fact that in one ward there were eleven cases, while in the same ward the week previous not a single case was reported. Eight cases of beri-beri were reported on board the German steamer "Steinbek," which arrived this week from Java.

TRANSACTIONS OF FOREIGN SOCIETIES.

Berlin.

IMPERMEABLE STRICTURE OF THE ESOPHAGUS FOLLOWING DIPHTHERIA — ENLARGEMENT OF THE PENIS FOLLOWING REMOVAL OF INGUINAL GLANDS —TREATMENT OF RECURRENT UTERINE CANCER— CAUTERIZATION AS A PREVENTIVE OF INFECTION —OVERFEEDING THE SOLE CAUSE OF CORPULENCE —PATHOLOGY OF BRONCHIAL ASTHMA—VALUE OF ORTHOFORM.

ROSENHEIM presented to the Medical Society, May 11th, a boy aged five years, who, after recovery from a severe attack of scarlet fever and diphtheria in his third year, suffered from a stricture of the esophagus twenty-two centimeters (nine inches) from his teeth. The caliber of this stricture decreased so much that even fluids could not be swallowed, and it was necessary to perform gastrostomy to save the boy's life. All attempts for some time to pass an instrument through the stricture, either from above or below through the fistula in his stomach, failed. At last a very fine sound was passed, and afterward a tent of laminaria, which by its swelling dilated the stricture so that the child could swallow fluid. Treatment was continued until by gradual dilatation the stricture was entirely cured.

EWALD mentioned two similar cases in which the stricture, though impermeable before the gastrostomy, had resolved of itself after the fistula in the stomach had been established. He explained this happy result by saying that the weight of the food in the stomach pulling on the esophagus gradually stretched and so dilated it that fluids and solid masses could pass the constriction. In both of the cases referred to the stricture followed ulceration, and was impermeable to the sound.

At the session of May 18th, MEYER presented a man with an enormously enlarged penis, the increase in the size of the organ following upon the double extirpation of the inguinal glands. It was due apparently to congestion, and there was not the slightest evidence of inflammation. The penis was of soft consistence. Meyer purposed to relieve the condition by a circumcision and resection of a wedge-shaped portion of the organ.

May 25th LANDAU showed a patient from whom he had removed per vaginam the uterus and adnexa for cancer. The growth recurred in a little less than three years, and he had performed an operation for the recurrence. The incision chosen was one beginning in the middle of the left labium majus, and extending backward, half encircling the rectum, and ending at the tip of the coccyx. This wound enabled the operator to remove the recurrent growths which had attached themselves to the bladder wall as well as to the small intestines. Through the vagina a gauze drain was inserted into the peritoneal cavity, and a tube was left in the perineal wound. The wounds were elsewhere sutured. The drains were removed on the fifth day, and the patient made a quick recovery. Landau advised the systematic inspection at regular intervals of all patients from whom the pelvic organs have been removed for carcinoma, as thereby recurrence will often be detected while there is still time to remove it. The incision above described is especially adapted to facilitate the removal of recurrences.

COHN read a paper in answer to the question, "How Far Does Cauterization of Aseptic Wounds Prevent an Infection with Diphtheria Bacilli or Pyogenic Streptococci?" From a long series of experiments with rabbits and guinea-pigs he concluded that cauterization with a stick of silver nitrate is far more powerful than all other caustic applications.

At the session of June 15th HIRSCHFELD spoke of the "Nutritive Needs of the Corpulent." Most authors have supposed that an excess of fat might be due either to a too great consumption of food or to a faulty constitution, which, without any overeating, could produce corpulence. Hirschfeld denies this latter statement, as his investigations have proved to him that corpulence is caused only by overconsumption of food. To settle the question he made observations to determine the amount of food required to keep normal individuals and those of unusual stoutness at an even weight. He found in them, except in so far as individuals differ one from another, no variations from a common law. One case was apparently an exception to this law. A prisoner who was upon a fixed diet made a rather rapid gain in weight of over fifty pounds. Investigation showed, however, that he had after several years incarceration obtained permission to receive sausage from home, which he ate in addition to the whole of the regular fare allowed him. To this overeating was due his increase in weight. The fact that so many women who are stout say that they are small eaters is explained by the writer on the ground that women are usually unwilling to confess to a large appetite.

At the Union for Internal Medicine, May 16th, Fränkel said that the variety of the anatomical conditions found in bronchial asthma indicate that there is not a single underlying process which is the same in all cases. In only four autopsies made upon patients who have died in an asthmatic attack have definite pathologic conditions been found. In one of these the finer bronchioles were filled with mucous clots, which, in some instances, took the form of Curschmann's spirals. The others had fibrinous clots, with the exception of one case, in which the bronchioles were blocked with the desquamated epithelium of an intense catarrh. Owing to the rarity of death in an attack of asthma of bronchial origin there is a sad lack of exact knowledge of the processes underlying the disease; but it may be taken for granted that a bronchiolitis with the formation of fibrinous clots must have been preceded by a marked destruction of the epithelial layer.

VON LEYDEN said that the scarcity of anatomic preparations which show the lesions of asthma is explained by the fact that as soon as an attack passes off the lungs of the patient are to all intents as sound as ever. For this reason, in making many autopsies upon asthmatic subjects, he had never found in a single instance anything in the lungs to explain the occurrence of the attacks. Often, indeed, when asthmatic patients are suffering from some more serious trouble which may cause death, the attacks of asthma disappear. The diag-

nosis during life is made without difficulty by the characteristic crystals which are found in the sputum. In a typical case, especially in young people, the patient coughs and wheezes, but brings up nothing at the height of the attack. When this has passed over a little he raises a stringy mucus, which is seen under the microscope to contain a network of fine fibrinous threads, the meshes of which contain the characteristic Leyden's crystals, and numbers of large epithelial cells. Later the fibrinous masses are set free and epithelial clumps are found in great abundance. In all probability these fibrinous plugs are formed by the coagulation of a serous exudate in the finest bronchioles or even in the alveoli, and as they are separated they bring away with them the epithelial lining of the bronchioles. If the loosening proceeds further mucous and mucopurulent balls appear in the sputum, the fibrinous plugs and crystals disappear. In chronic cases the bronchioles do not become entirely free, but there remains in the finest bronchioles a certain amount of mucous or epithelial matter, which produces emphysema. Still in some chronic cases the restoration to the normal after an attack is so perfect that nothing at autopsy shows that there has been any asthma. This is the more encouraging clinically, as showing that bronchial asthma, even in its severe form, is not incurable, and that the patients suffer more from the complications which are apt to appear in advanced age, than from the asthma itself. This is particularly true of arteriosclerosis. Bronchial asthma may be spoken of as fibrinous broncholitis, but though it has much in common with fibrinous bronchitis, it is not the same thing, for fibrinous bronchitis may exist without asthma. It may also come from an acute catarrh, but only in individuals who are predisposed to asthmatic attacks.

Eosinophile cells are seen in great numbers in the sputum in almost every attack of asthma. The most rational explanation of this fact is that the serum which exudes in the alveoli and in the small bronchi, and which later forms the coagulations and the crystals, has a chemotactic action upon the eosinophilic cells of the blood, drawing them thither in great numbers. Attempts to make of asthma an infectious process have failed. That infection is not present is shown by the absolute lack of suppuration in the fresh attacks. The micro-organisms which have been described in this connection have their origin doubtless in the larger bronchi.

MOSSE reported the "Results of Six Month's Experimentation with Orthoform." This powder was used by insufflation in painful affections of the upper air-passages, whether tubercular or due to acute poisoning, or of an infectious nature, such as angina or diphtheria. In all these cases the orthoform showed itself possessed of anesthetic power, lasting some hours more or less. Internally it was given either as a powder or in solution in doses of 1 to 1.5 grams (15 to 22 grains) for ulceration of the stomach. The powder sometimes provoked nausea, and the solution is therefore recommended. No other objectionable symptom was developed, but at times it appeared as if the patient grew accustomed to the drug, which thereby lost some of its efficiency.

HERZFELD found orthoform of much use in syphilitic and tuberculous ulcers of the throat. The effect lasted for some hours, in rare cases for a whole day. The difference in the duration of the relief from pain might be due to the varying amount of secretion present. It is purely a local anesthetic, and has no effect on the healing process.

VON LEYDEN had found orthoform of great value, and looked upon it as the best substitute for cocain, which it surpasses in being free from any general constitutional effect. It can, therefore, be prescribed without the fear of injury which sometimes follows the administration of cocain.

FRAENKEL called attention to the fact that orthoform has no effect upon the sound mucous membrane or skin, and in this respect cannot altogether take the place of cocain.

SOCIETY PROCEEDINGS.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY OF NEW YORK.

Stated Meeting, Held May 18, 1898.

THE President, L. DUNCAN BULKLEY, M.D., in the Chair.

ASCENDING OPTIC NEURITIS OF PROBABLE SYPHILITIC ORIGIN.

DR. ROBERT H. GREENE: I would be very glad to have any suggestion made as to the treatment to be employed in the following case. The patient, a man, came under my care two years ago suffering from tertiary syphilis. I put him through a most vigorous course of inunctions and also gave him mercury and iodid of potash internally and tonics to improve the general condition. He did well under this treatment until six months ago when he began to complain of poor vision in the left eye. He was examined by Dr. Kalish, who came to the conclusion that the man was suffering either from optic neuritis or commencing atrophy of the optic nerve. Dr. Collins also saw the patient and expressed the same opinion. At the latter's suggestion I gave the patient strychnin until its physiologic effect was obtained, and also hypodermatic injections of mercury, but without effect. Finally I employed fumigations of calomel and cinnabar and a Charcot spinal douche. His general condition improved and the sight of the left eye became somewhat better. The latter improvement was only temporary, however, and the right eye has now become affected. During the daytime, especially in the glare of the sun, he is almost totally blind. He sees better at night, but he complains of a burning sensation in his eyes. In other respects he seems perfectly well and feels better than he has for years. This is a very meager history from which to make a diagnosis, but if any of the members can express an opinion as to the pathologic condition present I will be very glad. The diagnosis I think lies between optic neuritis, hemorrhage, and gumma.

DR. ROBERT MILBANK: I would like to ask Dr. Greene as to the condition of the pupil of the affected eye

Last November I presented a case before this society in which there was dilatation of the pupil of one eye which had come on suddenly three years previously in a patient who had suffered from syphilis. Under pilocarpin or eserin vision in that eye was as good as that of the other, but as soon as the effect of the drug wore off the pupil again enlarged. It was suggested that he be kept under mercurial treatment, although he showed no other symptoms of syphilis at the time, and ever since he has been taking an eighth of a grain of biniodid of mercury three times a day. The condition of the pupil has not changed however.

DR. ROBERT A. MURRAY: Experience has taught me that these patients improve up to a certain point, reaching a pretty fair state of nutrition, but they progress no further under treatment. The iodid seems to lose its power and some nerve manifestation appears. Occasionally, pilocarpin administered for a little while will result in increasing the effect of the other drugs. I have also seen good results follow the use of conium, given in combination with the iodid. Arsenic in the form of Fowler's solution also aids mercury in its action. If the patient becomes stout under treatment, as is apt to be the case, we should watch the kidneys carefully, for trouble in these organs is very likely to develop. I have also noticed that when the nervous system becomes involved the effect of remedies is less than in patients who do not have this complication. Their condition will remain stationary for a long time and it is almost impossible to obtain any effect from medication.

DR. S. H. DESSAU: Following out the same line of thought suggested by Dr. Murray in regard to the action of the iodid of potassium and the mixed treatment in syphilis, especially in the tertiary stage, I would like to call attention to the use of coca as an adjuvant. I have seen it employed with very remarkable effect in cases in which the patients have been under treatment for years previously without benefit. In one case in particular in which all the manifestations of the disease were present the effect was marvelous. When the patient was first seen there was extensive sloughing of the calf of the leg. He afterward had an eruption of pityriasis rubra universalis, at least a hatful of scales being desquamated daily. Nervous manifestations subsequently appeared, with paralysis of the right deltoid muscle, and finally the patient developed elephantiasis of one leg, and also brain symptoms. At this time he was taking massive doses of iodid of potassium without benefit. As he was very anemic he was also given iron, and, finally, I gave him coca, having read somewhere that this drug is useful in such cases. After he had taken the coca for a week a wonderful change took place, and the elephantiasis disappeared in a short time. Since then I have looked up the literature to see if mention has been made of this remedy, and I find that it is referred to in an Edinburgh journal and also in the edition of Bumstead's work edited by Dr. Taylor.

DR. JOSEPH COLLINS: I examined the patient referred to by Dr. Greene and found the man suffering from well-marked atrophy of the optic nerve of the left eye and a beginning atrophy of the nerve of the left eye. There were no other nervous manifestations. The condition is not especially rare and is in no wise remarkable. Such cases are described in the books as one of the cranial nerve manifestations of syphilis. It is impossible to say whether the lesion is a syphilitic degeneration of the nuclei of the optic nerve of whether it is an infiltration of the sheath. We all know that syphilis has a marked predilection for the cranial nerves, and the second pair is unfortunately often involved. Sometimes it affects the nuclei, sometimes the gummatous formation encroaches on the nerve trunk. A certain proportion of syphilitics become blind from ascending atrophy, and the case in question is an instance of this. I was asked to see the patient largely because it was desired to exclude tabes and beginning general paresis. It was not difficult to do this because there were no symptoms of tabes, no Argyll Robertson pupil, no change in the knee-jerks, no disturbance of sensation, and none of the physical and mental manifestations of the latter disease. By a process of exclusion and from ophthalmoscopic examination the diagnosis of the ascending optic neuritis was made. It was considered that this was a syphilitic lesion, and I advised that the patient be given hypodermatic injections of mercury alternated with hypodermatic injections of strychnin. It is very sad to watch these patients go on to complete blindness but there seems to be no way to prevent it. I have no doubt that the President has seen such cases in the institutions with which he is connected, in the reports of which they unfortunately often figure.

DR. MURRAY: In regard to pilocarpin in syphilitic diseases of the eye, especially those due to gummata, in which it is said that in the beginning the trouble is not due to atrophy of the nerve but to an effusion around the sheath, pilocarpin administered until its constitutional effects are produced will result in an astonishingly rapid absorption effect. Should any secondary effect be noticed, this can be contra-acted by atropin or strychnin. The pilocarpin acts by stimulating the glands of the skin, an effect similar to that which follows hot baths. Large quantities of the iodid should also be given. It is logical to conclude that anything which will stimulate the glands will make the remedies used more potent.

DR. RICHARD KALISH: I saw this patient of Dr. Greene's in August, 1897. There was some hyperopia with irregular astigmatism and quite a number of floating bodies in the vitreous. The nerve head was bluish in color, and slightly excavated in the center. The central artery was reduced in size and the veins dilated. There was no evidence of the existence of retinitis or of choroiditis. The perimeter showed a contraction of the field of vision on the nasal side. I agreed with Dr. Greene that the probable cause was syphilis, and that the patient should be treated on that basis.

In December I saw the patient again and found his vision to be somewhat improved. The floating bodies in the vitreous were less in number, the nerve was paler in color, and the arteries and veins reduced in size. There was an improvement in the field of vision, it being about normal. I could see no reason for changing my diagnosis and advised a continuance of the treatment.

THE PRESIDENT: The mention of conium reminds me that this is a remedy commonly employed by me. I have found that the extract has more effect than conium in tablet form.

DR. J. HENRY FRUITNIGHT then read the paper of the evening, entitled

HEREDITARY INFANTILE SYPHILIS. (See page 129.)

DISCUSSION.

DR. WILLIAM STEVENS: The author has handled the subject in a most thorough manner. I recall a case of a child about five years of age, whose father had suffered from syphilis. I had lost sight of the family after I attended the mother when the child was born. I found the child pigeon-breasted and very feeble. I ordered iodid of potassium and mercury, the latter in the form of calomel, $\frac{1}{10}$ of a grain several times a day, and also cod-liver oil. The child improved very much, gained in weight, and a great deal of the apparent malformation of the chest disappeared within three weeks.

DR. MURRAY: The subject is an extremely interesting one to us all and we should thank the author for bringing it before us. The paper is especially valuable for the reason that it informs us of the signs by which we can determine the existence of hereditary syphilis. It is absolutely necessary that we be able to do this because of the impossibility of obtaining a reliable history from the parents. It is proverbial that persons with syphilis or gonorrhea are liars. It is useless to question the father or mother in these cases for they will only mislead one. We must be able to recognize the signs of the disease. An important point to remember is this: When a miscarriage occurs, make careful observations in order to find out, if possible, what caused the death of the fetus. Or, if this cannot be done without arousing the woman's suspicions, examine the epiphyses of the long bones, also the hair. I have already reported two cases in which I was able to make the diagnosis in this way, and by treatment vigorously employed have been able in subsequent pregnancies to carry the patients to full term and deliver them of living children. It is extremely difficult to make a diagnosis of hereditary syphilis in young children in cases in which the mother has been delivered by some other physician. The history obtainable from the parents is always too meager and unreliable to tell us anything. The existence of the disease can usually be determined by the presence of snuffles in the child, although it must not be lost sight of that this symptom may be due simply to a cold.

In regard to the treatment of the syphilitic pregnant woman, I believe there is nothing better than inunctions of mercury. If the drug is given by mouth it often upsets the stomach and adds to the nausea. Another reason why inunction acts well is because when this method is employed the patient is obliged to bathe frequently and the result is that the skin is kept active. Then, too, mercury is much better for pregnant women than iodid of potassium. For infants I employ mercurial inunction immediately after birth, and also inunctions of cod-liver oil to relieve the inanition and marasmus. In the very bad cases there is nothing to be done; the children always die. The main point is to make the diagnosis in the mother, to institute treatment at once, and to carry it on to the very day of confinement. If the treatment is not kept up late the child may die at the last moment or during labor, for, if the woman has never before given birth to a full-term child she will probably have a difficult labor, and the child will not stand much pressure with forceps. The latter point is an important one for obstetricians to bear in mind. Hydrocephalus is also common in syphilitic children, and I have seen several cases in which there was hydroperitonitis.

DR. KALISH: In regard to the point made by the last speaker, *i. e.*, that the parents of this class of patients are liars, I would like to narrate an experience which strongly bears this out. Some years ago in the late spring a nursing woman was brought to me suffering from neuroretinitis. I happened to know that her husband had had syphilis some years previously and had declined treatment. I ordered that the baby be weaned and put the woman upon appropriate treatment which resulted in curing the retinitis. While she was under my care she brought the child to me. It had the typical symptoms and there could be no doubt that it was suffering from hereditary syphilis. The father insisted that I treat the child as he did not want the cause of its illness to become known. I consented to take charge of the case and ordered small doses of gray powder and cod-liver oil inunctions. The eruption disappeared in a marvelously short time and the child improved in every way. I then left town for the summer and turned the case over to a colleague with instructions to continue the treatment. For some reason unknown to me this physician was not acceptable to the parents and they took the child to another medical man without informing him as to the history of the case. The child was treated for marasmus and died within six weeks. When I asked the father why he had not told the physician the nature of the trouble from which the child was suffering, he replied that he thought it was the doctor's business and not his to find out what ailed the child.

DR. GREENE: There is only one point in the author's exceedingly valuable paper upon which I am obliged to disagree, and that is in regard to the existence of scars around the child's mouth being a positive diagnostic sign of syphilis. There is no doubt that in the majority of cases these scars are due to syphilis, but such is not the case in every instance. A patient in whom these scars were present in a marked degree was recently shown before the Genito-Urinary and Dermatological Society, but there were no other evidences of syphilis in the child and none in the parents. The scars were apparently due to some trophic nerve disturbance, causing atrophic changes in the skin which had taken place during fetal life.

I am quite in accord with the author in regard to treatment. I would suggest, however, that the tannate of mercury is an agreeable form in which to administer this drug to children. It can be given dissolved in milk. Iodid of potassium when given in infantile syphilis gives good results in the same class of patients as it does in

adults., *i. e.*, those who have syphilis of the deeper tissues of the body. In such cases my experience has shown that large doses can be given. Small doses may be given at first and gradually increased. I once gave to a child four years of age from 200 to 300 grains of the iodid during a period of several months, with exceedingly good results. The prognosis of the disease in children is very much like that in adults. If the child is born with syphilis and the deeper structures of the body are attacked the outlook is bad. If the skin and mucous membrane alone are involved the prognosis is more hopeful. My experience leads me to believe that in a large proportion of cases the disease is acquired soon after birth and is not congenital. I have seen four or five cases of chancre of the tonsil in young babies.

DR. MILBANK: The author told us that he did not propose to treat the subject of hereditary infantile syphilis in an exhaustive manner, and this accounts for the fact that lesions of the osseous structures are barely touched upon in the paper. These are most important for they usually develop early and are, therefore, valuable diagnostic signs. The longer the interval between the infection of the parent and the appearance of syphilitic manifestations in the child, the less of an inflammatory nature are the bone lesions. We often find osseous lesions of a low grade of inflammation in young children, and in some cases it is very difficult to make the diagnosis. In two cases which came under my observation this was determined by the result of antisyphilitic treatment.

I am compelled to disagree with the author in his statement in regard to the diagnostic significance of "Hutchinson teeth." There are two varieties of "Hutchinson teeth"—the small "peg" teeth and the notched teeth. The former are not pathognomonic of syphilis, but I never saw a case in which the latter were present in which syphilis could be positively excluded. The most frequent lesion of early syphilis is the fissures of the anus which are positively pathognomonic. In regard to treatment, I use inunctions in preference to anything else, although I occasionally employ gray powder.

DR. MURRAY: Some years ago I made the assertion that when a woman contracts syphilis during a pregnancy the child is seldom born alive. She will usually miscarry. Snuffles is one of the earliest symptoms of infantile syphilis. It interferes with the nutrition of the child, and causes a great deal of restlessness which robs the mother of her rest. I have found that this symptom can be relieved by bromid of potassium, ¼- to ½-grain every two hours.

DR. DESSAU: The paper deals largely with the question of diagnosis, and there are a few remarks I would like to make upon this point. My experience has led me to think that we cannot depend upon any one sign or symptom in making the diagnosis of infantile syphilis. Notched teeth have been mentioned as pathognomonic. I know for a fact that the younger men are very apt to be led to make a diagnosis of syphilis from this one symptom. This is a great mistake. The notched teeth of hereditary syphilis are the second teeth. If the first teeth are notched, the cause is rickets. When the permanent teeth are notched, some other lesion of syphilis is almost invariably present.

As to the eruption, I do not think that even an expert is justified in making a diagnosis of infantile syphilis from the eruption alone. There must be a multiplicity of lesions in order that the disease may be identified. Dr. Murray has mentioned a manifestation which is rare but which I have seen, *viz.*, peritonitis; but I do not think that any one would be willing to make a diagnosis of syphilis in a new-born babe because it had peritonitis. I was taught that an eruption on the palms of the hands and soles of the feet was diagnostic of hereditary syphilis, but I have found that this alone is not more reliable than any other single lesion for I have seen it in patients who were not syphilitic. It is important to recognize the fact that the diagnosis must depend upon the clinical picture which the patient presents. In regard to treatment, mention has been made of many remedies, but I have failed to see a case in which any other drug than mercury was necessary. I use inunctions only and have never seen a child who did not respond to this treatment unless its condition was extreme. I would never administer mercury internally to a new-born infant.

I recently saw in consultation a very interesting case of acquired syphilis in a young child. It was one of five who had contracted the disease from its mother who had a chancre of the cheek. These cases have elsewhere been reported as "an epidemic of syphilis." The child in question was ten months old and at the time I was called was supposed to be suffering from laryngeal stenosis. There was no difficulty of respiration, however. The child was intensely anemic and had a characteristic macular eruption. There was extensive swelling and infiltration of the tonsil and pharyngeal wall, which were superficially ulcerated. There was also infiltration of the lymphatics of the neck. Suppuration and evacuation occurred subsequently and the urgent symptoms were relieved. There was no rise of temperature. The case was evidently one of post-pharyngeal abscess of syphilitic origin.

DR. A. M. JACOBUS: My experience in treating hereditary syphilis has been so limited that it is not worth mentioning. As to gray powder, I believe it to be more efficient and better borne than any other mercurial, calomel ranking second. I am surprised at the large amount or daily dose recommended by the author for young children, for, while these are my favorite remedies in the treatment of syphilis, I have never found it necessary to give more than six or eight 1-grain gray powder tablets, or from four to six ¼-grain tablets of calomel, per day even to adults. In this connection I desire to report a case in order to create discussion as to the causal relationship, if any, of syphilis in the mother and anencephalus in the fetus, complicated by hydramnion.

Mrs. L., aged twenty-four years, married in 1894, gave birth to her first baby in July, 1895, and through infection, believed to have been contracted from a water-closet seat used by a servant who was later found to be suffering from syphilis, developed a chancre on the left

labium majus in December, 1895. The initial lesion was not recognized until later. An attack of measles masked the early symptoms, and it was not until a well-marked squamous syphilide of the palms of both hands broke out in March, 1896, that the diagnosis was made. This was confirmed by Dr. A. R. Robinson, and the patient put upon specific treatment. Somewhat after the Hutchinson method, she was given four to six ¼-grain calomel tablet triturates per day, according to their effect, alternating every two to three weeks with 1-grain tablet triturates of gray powder six to eight times a day. The eruption and other symptoms of syphilis rapidly disappeared under the treatment. The gray powder seemed to cause less flow of saliva and less frequent action of the bowels. The young woman again become pregnant in September, 1896, but aborted in November, probably as a result of the syphilis. In May, 1897, she became pregnant for the third time after having been taking the mercurials some fourteen months. The patient was advised to continue her medicine daily, but during the summer, partly from carelessness and partly because she felt so well, she omitted the mercurials for some two or three months, until I saw her again after her return to the city, when the desirability of further treatment until confinement was brought to her attention and insisted upon. After the fifth month of pregnancy the mother suffered greatly from the violent movements of the fetus which increased in force as gestation progressed and could be seen across the room as the abdomen was struck from within. During the last few months of pregnancy the abdomen became very large and tense, and this, together with the violent movements led her to believe that there were twins in utero. I made a careful examination at the eighth month, but the tension was very great, and, although I was puzzled at not finding the head either high or low, I concluded that there was but a single fetus with dropsy of the amnion.

Labor set in late on February 13, 1898, with a transverse presentation, and early on the 14th, not being able to fix the head at the pelvic brim, I ruptured the membranes, discovered that there was a malformation of the head, and shortly after delivered the child which proved to be a typical case of anencephalus. The child did not move after the body became engaged; it was perfect except for the entire absence of the skull and brain, there being nothing but a flat, hairy scalp, and a macerated or raw fleshy spot about two inches in diameter in the center at the foramen magnum. The amniotic fluid was not measured, but probably amounted to eight or ten quarts and had a peculiar odor like that in cases in which a fetus has been dead in utero for a week or two. The patient was up and about at the end of the second week but developed a slight phlebitis or lymphangitis in the left femoral region during the third week which caused a return to bed for about ten days, after which the puffy extremity and the indurated condition under Poupart's ligament slowly disappeared in the course of six months.

The question is whether the syphilitic taint in the mother caused the malformation of the fetus and the polyhydramnion. The transverse presentation was of course due to the two latter conditions.

THE PRESIDENT: There is one remedy which has not been mentioned in the treatment of hereditary infantile syphilis, *viz.*, the syrup of the iodid of iron in large doses. The Hutchinson treatment (the precipitates with gray powder tablets, and calomel tablets) is simply ideal. It is extremely important to keep the mother under mercurial treatment until the child is born.

DR. FRUITNIGHT, in closing: Much has been said which I had in mind, but, as I said before, the paper was not intended to cover the whole ground. In regard to the radiating scars at the angles of the mouth, it seems to me that in most cases these are diagnostic. If these exist with no other symptoms, this would prove to me—what I have always thought very probable—that syphilis had existed in the mother while the child was in utero and the disease had been checked by appropriate treatment. I touched upon the bone lesions which have been referred to by one of the speakers. I do not consider the "Hutchinson teeth" as absolutely pathognomonic; nor do I think that the diagnosis of hereditary syphilis should be made from one symptom alone. There seems to be some confusion as to the terms congenital and early syphilis. The former applies only to those cases in which the disease is present when the child is born; the latter to those in which the disease is acquired, as from a wet-nurse, after birth. If a woman who is suspected to be syphilitic has been nursing her child, the latter should be placed under treatment at once to counteract the bad effect of the milk. In regard to Dr. Jacobus' case, it has been proved that syphilitic infection is apt to produce hydramnion and hydrocephalus in the offspring.

REVIEWS.

A LABORATORY GUIDE IN PHYSIOLOGY. By WINFIELD S. HALL, PH.D., M.D., Professor of Physiology, Northwestern University Medical School, Chicago. With Appendices on Organization and Equipment. Two colored plates and sixty illustrations. Chicago: Chicago Medical Book Co., 1897.

TO students and laboratory workers in practical physiology, this little book is a valuable aid, but a fair knowledge of mathematics, physics, and anatomy is required as a working basis. The inductive methods of study are used. "The student is given the technic and, through a series of questions, he is guided in his observations. He is not, however, told what he is expected to observe, nor is he told what his conclusions are expected to be." In a well-equipped laboratory with sufficient trained instructors, this general plan will usually succeed and be most satisfactory. Without the above-named assistance, however, the book is occasionally too vague and concise in statement to be of great practical value.

Under the heading of "General Physiology," the methods of observing ciliary motion and the various effects of stimulation of muscle and nerve tissue are described. The subjects presented in Part on II. "Special Physiology"

are: the circulation, respiration, digestion, and absorption, vision, physiological hematology, and an introduction to pharmacology. Other subjects, excretion, animal heat, the voice, hearing, and the nervous system, are promised in a future edition. The appendices contain a description of laboratory appliances and instruments, fully illustrated, and a table giving their cost.

The book has been written with a distinct purpose, and, although its range of application is limited, its usefulness is evident.

THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY. Being a Yearly Digest of Scientfic Progress and Authoritative Opinion in All Branches of Medicine and Surgery, drawn from Journals, Monographs, and Text-Books of the Leading American and Foreign Authors and Investigators. Collected and arranged, with critical editorial comments, by twenty-seven contributors, under the general editorial charge of GEORGE M. GOULD, M.D. Illustrated. Pp. 1077. Philadelphia: W. B. Saunders, 1898.

WHEN one considers the enormous yearly strides made in the medical sciences, the vast amount of original contributions to medical literature and the verification of new facts and discoveries some notion may be obtained of the stupendous work involved in the publication of a *Year-Book*, such as the one under consideration.

The general arrangement of the book is similar to that of the two preceding volumes, and the editorial staff remains practically the same. We note the resignation of Dr. Henry Leffmann, who formerly edited the Chapter on Medical Jurisprudence, Hygiene, and Clinical Chemistry, and the division of this chapter into three distinct departments with three new writers, *viz.*, Legal Medicine, by Wyatt Johnston; Public Hygiene and Preventive Medicine, by Samuel W. Abbott, and Physiologic Chemistry, by John J. Abel.

To review the articles in a work of this kind *seriatim*, would be to review the current medical literature of the year. Suffice it to say, therefore, that the work is a most faithful portrayal of all the advances in medicine, exceptionally well edited and arranged, and throughout clear and concise in statement. A simple glance at the full and excellent index demonstrates that it is a veritable encyclopedia. The previous volumes have heretofore occupied the highest plane among books of this kind, and we prophesy for the present one a continuance of this popularity.

TRANSACTIONS OF THE BRITISH ORTHOPEDIC SOCIETY. Vol. II., 1896. Published by the Society. London: John Bale, Sons & Danielsson, 1897.

THIS is a small pamphlet containing eighteen communications pertaining to this special department of surgery. "Congenital Dislocation" is represented by four papers contributed by W. Thomas, N. Smith, Tubby, and Keetley, each of whom offers a different plan of treatment for this affection. The bloodless method of Lorenz receives but scant attention. The Society has under consideration a plan to make a collective investigation as to the results following the various methods employed in treating this malady. An interesting article is that on recrudescent rickets by R. Jones, a subject which has received renewed consideration in connection with coxa vera, which affection is not mentioned in the discussion of the paper. In a discussion on "The Early Diagnosis of Affections of the Spinal Column," W. Thomas calls the attention of the Society to a new diagnostic element early in the development of scoliosis, a clonus of the erector spinæ produced by pressing sharply on one shoulder and then holding it firmly. The remainder of the articles are commonplace.

THERAPEUTIC HINTS.

Removal of Freckles.—1. Apply the following lotion to the face morning and evening:

℞ Zinci sulphocarbolat . . . . . ʒi
Glycerini . . . . . ℥ii.
M. Sig. External use.

2. Cover the freckles every other day with the following ointment:

℞ Hydrarg. ammoniat. } aa . . . ʒi
Bismuth subnitrat. }
Glycerit. amyl. . . . . ℥ss.
M. Ft. ungt. Sig. External use.—*Tonvenaint.*

Local Application in Gout.—

℞ Potassii iodi } aa . . ʒiv
Liniment saponis }
Ol. cajaputi } aa . . . ʒss
Ol. cari }
Spiritus rect. . . q. s. ad. ℥vii.
M. Sig. Apply on lint and cover with a protective.

For Syphititic Arthritis.—In cases in which the acute local pain and sensitiveness preclude mercurial inunctions or subcutaneous injections it is recommended to begin with internal mixed treatment as follows:

℞ Hydrarg. iodi rubri . . gr. iss
Potassii iodi . . . gr. lxxx
Sherry wine . . . ʒv
Aquæ. . . . q. s. ad. ℥vi.
M. Sig. Two tablespoonfuls a day.

For Psoriasis.—The following internal treatment is recommended by Brory in conjunction with external applications:

℞ Sodii arseniat. . . . . gr. $\frac{1}{10}$
Sodii salicylat. . . . . gr. xlv
Sodii bicarb. . . . . ʒii
Syr. saponariæ . . . . ℥iv
Tinct. gentian. comp. } aa . . ℥ii.
Syr. simplicis }
M. Sig. One tablespoonful three times a day at mealtime.

For Ivy Poisoning.—Keep affected parts wet with freshly made lime-water. Give the following mixture internally:

℞ Ext. tritici fl. . . . . ʒiv
Spts. etheris nitrosi } aa . . . ℥i.
Syr. limonis }
M. Sig. One teaspoonful four times a day.